Forty-fifth Annual Catalogue

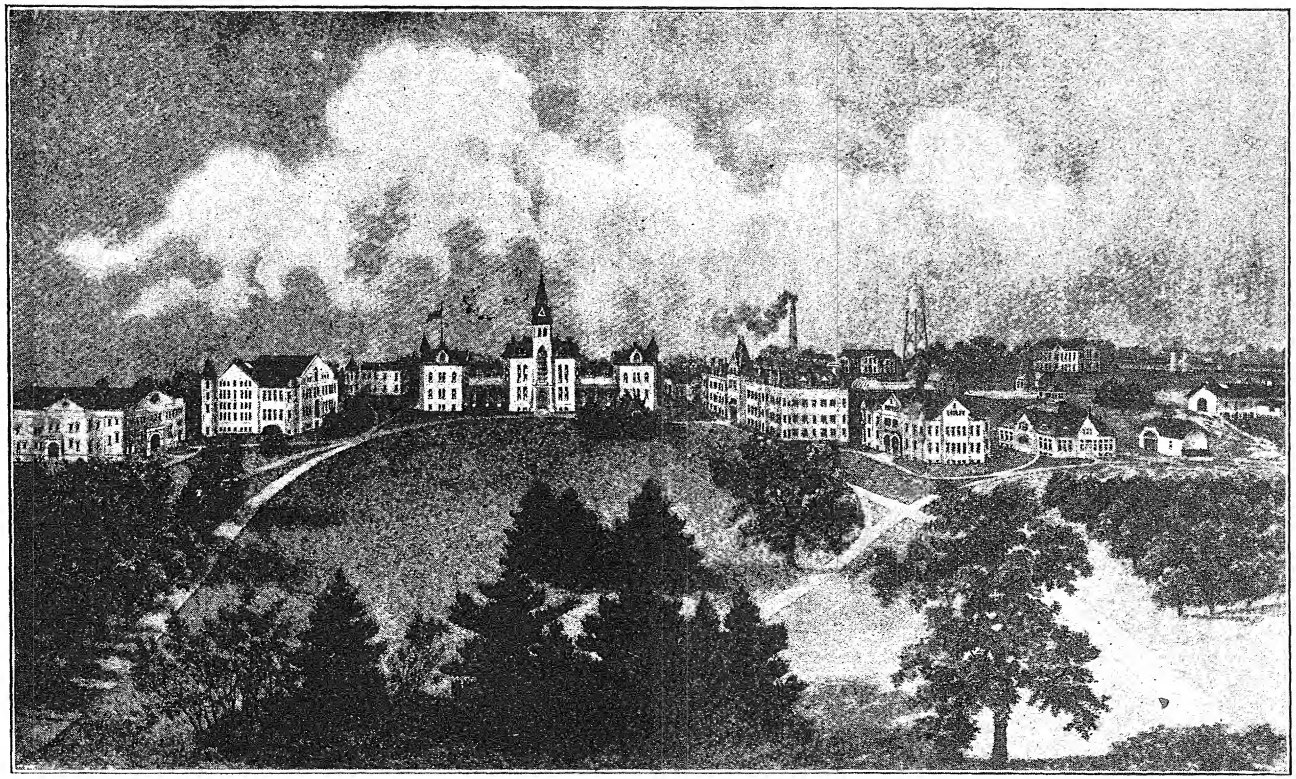
Of the Officers, Students and
Graduates of the

Kansas
State Agricultural College,

Manhattan.

1907-'08.

STATE PRINTING OFFICE,
TOPEKA, 1908.
1942



GENERAL VIEW.

TERMS AND VACATIONS.

FALL TERM, 1908, THIRTEEN WEEKS.

WEDNESDAY, SEPTEMBER 16.—Examination for admission, at nine A. M.
THURSDAY, SEPTEMBER 17.—College year begins.
THURSDAY, SEPTEMBER 17.—Short course in domestic science begins.
SATURDAY, OCTOBER 31.—Mid-term examination.
THURSDAY, NOVEMBER 26.—Thanksgiving Day vacation.
THURSDAY AND FRIDAY, DECEMBER 17, 18.—Examination at close of term.

WINTER TERM, 1909, TWELVE WEEKS.

MONDAY, JANUARY 4.—Examination for admission, at nine A. M.
TUESDAY, JANUARY 5.—Winter term begins.
TUESDAY, JANUARY 5.—Short courses in agriculture and dairying begin.
SATURDAY, FEBRUARY 13.—Mid-term examination.
THURSDAY AND FRIDAY, MARCH 25, 26.—Examination at close of term.

SPRING TERM, 1909, ELEVEN WEEKS.

MONDAY, MARCH 29.—Examination for admission, at nine A. M.
TUESDAY, MARCH 30.—Spring term begins.
SATURDAY, MAY 8.—Mid-term examination.
TUESDAY, MAY 18.—Beginning of summer course in domestic science.
TUESDAY AND WEDNESDAY, JUNE 15, 16.—Examination at close of year.
JUNE 13 TO 17.—Exercises of commencement week.
THURSDAY, JUNE 17, at ten A. M.—Commencement.
JUNE 18 TO SEPTEMBER 22.—Summer vacation.

FALL TERM, 1909.

WEDNESDAY, SEPTEMBER 22.—Examination for admission, at nine A. M.
THURSDAY, SEPTEMBER 23.—College year begins.

Students must be present the very first day of each term or render a reasonable excuse. Failure to take out an assignment will not be accepted as an excuse.

BOARD OF REGENTS.

HON. A. M. STORY (1909),[1] *President,*
Manhattan, Riley county.

HON. J. O. TULLOSS (1911), *Vice-president,*
Sedan, Chautauqua county.

HON. J. S. McDOWELL (1909),
Smith Center, Smith county.

HON. GEO. P. GRIFFITH (1909),
Hays, Ellis county.

HON. EDWIN TAYLOR (1911),
Edwardsville, Wyandotte county.

HON. W. E. BLACKBURN (1911),
Anthony, Harper county.

PRES. E. R. NICHOLS (*ex officio*), *Secretary,*
Manhattan, Riley county.

MISS LORENA E. CLEMONS, *Assistant Secretary,*
Manhattan, Riley county.

1. Term expires.

BOARD OF INSTRUCTION.

THE FACULTY.

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President.

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Director of Experiment Station.

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Professor of Mechanical Engineering, Superintendent of Shops.

ALBERT DICKENS, M. S. (Kansas State Agricultural College),
Professor of Horticulture, Superintendent of Grounds.

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Professor of German.

OLOF VALLEY, B. M. (Chicago Conservatory),
Professor of Music.

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Professor of Veterinary Science.

ROLAND J. KINZER, B. S. Agr. (Iowa State College),
Professor of Animal Husbandry.

WALTER E. KING, M. S. (Cornell University),
Professor of Bacteriology.

THOMAS J. HEADLEE, Ph. D. (Cornell University),
Professor of Entomology.

CHAS. H. BOICE, First Lieutenant Seventh Cavalry, U. S. A.,
Professor of Military Science.

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MISS ANNE M. BOYD, A. B., Lib. Sci. (Millikin),
Librarian.

ROBERT J. BARNETT, B. S. (Kansas State Agricultural College),
Principal Preparatory Department.

MISS LORENA E. CLEMONS, B. S. (Kansas State Agricultural College),
Secretary.

1. Since January 1, 1908.

ASSISTANTS.

JACOB LUND, M. S. (Kansas State Agricultural College),
Superintendent Heat and Power Department.

JOHN H. MILLER, A. M.,
Superintendent Farmers' Institutes.

CLARENCE L. BARNES, D. V. M. (Cornell University),
Assistant Professor of Veterinary Science.

JOHN O. HAMILTON, B. S. (University of Chicago),
Assistant Professor of Physics.

ANDREY A. POTTER, S. B. (Massachusetts Institute of Technology),
Assistant Professor of Mechanical Engineering.

ROBERT H. BROWN, B. M. (Kansas Conservatory of Music), B. S. (Kansas State Agricultural College),
Assistant Professor of Music.

BENJAMIN R. WARD, A. M. (Harvard),
Assistant Professor of English.

GEO. A. DEAN, M. S. (Kansas State Agricultural College),
Assistant Professor of Entomology.

GEORGE F. FREEMAN, B. S. (Alabama Polytechnic Institute),
Assistant Professor of Botany.

GEO. C. WHEELER, B. S. (Kansas State Agricultural College),
Assistant Professor of Animal Husbandry.

WILLIAM H. ANDREWS, A. B. (University of Chicago),
Assistant Professor of Mathematics.

MISS ADA RICE, B. S. (Kansas State Agricultural College),
Instructor in English.

MISS ELLA WEEKS, A. B. (University of Kansas),
Instructor in Drawing.

MISS DAISY ZEININGER, B. A. (Fairmount),
Instructor in Mathematics.

LEONARD W. GOSS, D. V. M. (Ohio State University),
Instructor in Veterinary Science.

ROBERT E. EASTMAN, M. S. (Cornell University),
Instructor in Horticulture.

MISS ULA M. DOW, B. S. (Kansas State Agricultural College),
Instructor in Domestic Science.

THEO. H. SCHEFFER, A. M. (Cornell University),
Instructor in Zoölogy.

HERBERT H. KING, M. A. (Ewing College),
Instructor in Chemistry.

JOHN B. WHELAN,[1] B. S. (Nebraska),
Instructor in Chemistry.

WILLIAM L. HOUSE,
Foreman of Carpenter Shop.

MISS GERTRUDE BARNES,
Assistant Librarian.

LOUIS WABNITZ,
Foreman of Machine-shops.

MISS INA E. HOLROYD, B. S. (Kansas State Agricultural College),
Assistant in Preparatory Department.

AMBROSE E. RIDENOUR, B. S. (Kansas State Agricultural College),
Foreman of Foundry.

MISS EMMA J. SHORT,
Assistant in Preparatory Department.

MISS INA COWLES, B. S. (Kansas State Agricultural College),
Assistant in Domestic Art.

MISS KATE TINKEY,
Assistant Librarian.

EARL N. RODELL, B. S. (Kansas State Agricultural College),
Assistant in Printing.

ROY A. SEATON, B. S. (Kansas State Agricultural College),
Assistant in Mechanical Engineering.

M. FRANCIS AHEARN, B. S. (Massachusetts Agricultural College),
Assistant in Horticulture.

MISS GERTRUDE STUMP, B. S. (Kansas State Agricultural College),
Assistant in Domestic Art.

M. SHELDON BRANDT, Ph. B. (Yale),
Assistant in Architecture and Drawing.

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1. Since April 1, 1908.

CHAS. YOST,
Assistant in Heat and Power Department.

EARLE B. MILLIARD,
Foreman of Blacksmithing.

J. T. PARKER,
Assistant in Woodwork.

J. D. MAGEE, A. M. (Chicago),
Assistant in Mathematics.

E. G. MEINZER, A. B. (Beloit),
Assistant in German.

MISS FLORENCE S. LATIMERN, B. M. (Ferry Hall Seminary),
Assistant in Music.

MISS MARJORIE RUSSELL (Mechanics' Institute),
Assistant in Domestic Science.

HERBERT F. BERGMAN, B. S. (Kansas State Agricultural College),
Assistant in Botany.

BURTON ROGERS, D. V. M. (Iowa State College),
Assistant in Veterinary Science.

MISS CLARA WILLIS (Framingham Normal),
Assistant in Domestic Science.

C. O. SWANSON, M. Agr. (Minnesota),
Assistant Chemist, Experiment Station.

EDW. C. CROWLEY, Ph. B. (Yale),
Assistant in Chemistry.

HUGH OLIVER,
Assistant in Heat and Power Department.

MISS CHARLAINE FURLEY, B. A. (Fairmount),
Assistant in Preparatory Department.

MISS JESSIE REYNOLDS, A. B. (University of Kansas),
Assistant in Preparatory Department.

LELAND E. CALL, B. S. (Ohio State University),
Assistant in Agronomy.

MISS MARY E. NESBIT, A. B. (Illinois University),
Assistant in Mathematics.

MISS ANNETTE LEONARD, A. B. (University of Kansas),
Assistant in English.

WILLIAM C. LANE, B. S. (Kansas State Agricultural College),
Assistant in Physics.

LOUIS H. BEALL, A. B. (Denison),
Assistant in English.

MISS FLORA C. KNIGHT, A. B. (University of Wyoming),
Assistant in English.

MISS GRACE H. WOODWARD (Boston School of Domestic Science),
Assistant in Domestic Science.

MISS NELLIE CAVE, B. M. (University of Nebraska), (Chicago Music College),
Assistant in Music.

MISS ANNA I. McKIRAHAN,
Assistant in Music.

MISS MARGARET MACK (Kansas State Normal),
Assistant in Preparatory Department.

EDWIN G. SCHAFER, B. S. (Kansas State Agricultural College),
Assistant in Agronomy.

ORIN A. STEVENS, B. S. (Kansas State Agricultural College),
Assistant in Botany.

CHARLES E. BASSLER, D. V. M. (Kansas State Agricultural College),
Assistant in Veterinary Science.

MISS MARY W. HANCOCK (Mechanics' Institute),
Assistant in Domestic Art.

S. W. McGARRAH, A. M. (Grove City College),
Assistant in Mathematics.

CARL G. ELLING, B. S. (Kansas State Agricultural College),
Assistant in Animal Husbandry.

ARTHUR L. PECK, B. S. (Massachusetts Agricultural College),
Assistant in Horticulture.

KIRK H. LOGAN, B. S. (University of Kansas),
Assistant in Physics.

C. A. ARTHUR UTT, B. S. (Cornell College),
Assistant in Chemistry.

MISS FLORENCE WARNER, B. S. (Illinois University),
Assistant Librarian.

MISS ANNA GORDON, A. B. (Iowa College),
Assistant in Preparatory Department.

LOREN CLARK,
Assistant in Printing.

MISS BERTHA M. JOHNSTON (Simmons College),
Assistant in Domestic Science.

HARRISON E. PORTER, B. S. (Kansas State Agricultural College),
Assistant in Mathematics.

E. L. SIEBER,[1] A. B. (Indiana University),
Assistant in Chemistry.

C. S. KNIGHT,[2] B. S. Agr. (University of Wisconsin),
Assistant in Agronomy.

EARLE BRINTNALL,[3] B. S. (Iowa State College),
Assistant in Dairy Husbandry.

J. B. PARKER,[4] M. A. (Ohio State University),
Assistant in Entomology.

WILLIAM NEILL,[5]
Dairy Herdsman.

G. A. PORTEOUS,[6]
Herdsman.

WM. A. LAMB,
Poultryman.

FLOYD HOWARD,
Farm Foreman.

ALEXANDER EDGAR,[7]
Herdsman.

WILLIAM R. LEWIS,
Custodian.

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1. Since December 1, 1907.
2. Since January 1, 1908.
3. Since February 1, 1908.
4. Since May 1, 1908.
5. Till March 1, 1908.
6. Till December 31, 1907.
7. Since January 1, 1908.

STUDENT ASSISTANTS.

MISS AMY ALLEN, B. S., Printing.
CLYDE H. ALSPAUGH, Horticulture.
MISS ELVA V. AKIN, B. S., Preparatory.
MISS CLARA BIDDISON, B. S., Preparatory.
HORACE E. BIXBY, Music.
RAYMOND W. BRINK, Zoölogy.
HARLEY J. BOWER, Agronomy.
ALEXANDER B. CRON, Agronomy.
JOHN W. CALVIN, B. S., Chemistry.
MISS ALLEN COOPER, B. S., Drawing.
MISS LELIA DUNTON, Domestic Art.
W. ENFIELD, Physics.
MISS MARIE FENTON, Physical Training.
MISS LOUIS FLEMING, Preparatory.
OLIVER H. GISH, Physics.
FRANK HARRIS, Surveying.
RALPH W. HULL, Agronomy.
RALPH R. HAND, Music.
ARTHUR H. HELDER, B. S., Horticulture.
MISS DAISY HORNER, B. S., Chemistry, Preparatory.
MISS EDNA JOHNES, Music.
HARRY E. KIGER, Surveying.
WALTER J. KING, Surveying.
MISS ADA LEWIS, B. S., Chemistry.
CHARLES MCKIRAHAN, Music.
ATSUSHI MIJAWAKI, B. S., Drawing.
JAMES A. MILHAM, Animal Husbandry.
MISS CHARLOTTA A. MORTON, Drawing.
MISS ANNA MONROE, B. S., Botany.
MISS JESSIE MARTY, Chemistry.
MISS GERTRUDE MCCHEYNE, Public Speaking.
MISS MARY MUDGE, B. S., Library.
EDWARD L. MCCLASKEY, B. S., Draftsman.
CARL MILLER, Agronomy.
VICTOR E. OMAN, Surveying.
ALVIN J. REED, Dairying.
MISS BLANCHE ROBERTSON, Clerk.
JAMES C. RICHARDS, Surveying.
WILSON G. SHELLEY, B. S., Preparatory, Agronomy.
MISS NELLIE THOMPSON, Clerk.
MISS DORIS TRAIN, B. S., Mathematics.
RAYMOND C. THOMPSON, Surveying.
MISS HELEN WESTGATE, B. S., Domestic Science, Drawing.
ROBERT E. WILLIAMS, Dairying.
CHARLES H. WITHINGTON, B. S., Entomology.
MISS ALBERTA WENKHEIMER, Preparatory.
MISS LURA WHARTON, Preparatory.
ROY M. WYATT, Surveying.

AGRICULTURAL EXPERIMENT STATION.

EXPERIMENTING STAFF.

ERNEST R. NICHOLS, President of the College.
CHARLES WM. BURKETT, Director.
JULIUS T. WILLARD, Vice-director; Chemist.
HERBERT F. ROBERTS, Botanist.
ALBERT DICKENS, Horticulturist.
ALBERT M. TEN EYCK, Agronomist.
FRANCIS S. SCHOENLEBER, Veterinarian.
ROLAND J. KINZER, Animal Husbandman.
THOMAS J. HEADLEE, Entomologist.
WALTER E. KING, Bacteriologist.
JOHN C. KENDALL,[1] Dairy Husbandman.

ASSISTANTS.

GEORGE A. DEAN, Assistant Entomologist.
CLARENCE L. BARNES, Assistant Veterinarian.
ROBERT E. EASTMAN, Assistant Horticulturist.
GEORGE F. FREEMAN, Assistant Botanist.
GEORGE C. WHEELER, Assistant Animal Husbandman.
CHARLES O. SWANSON, Assistant Chemist.
LELAND E. CALL, Assistant Agronomist.
EDWIN G. SCHAFER, Assistant Agronomist.
CARL G. ELLING, Assistant Animal Husbandman.
HERBERT F. BERGMAN, Assistant Botanist.
ARTHUR L. PECK, Assistant Horticulturist.
EARLE BRINTNALL,[2] Assistant Dairy Husbandman.
ETHEL W. EDWARDS, Executive Clerk.

FORT HAYS BRANCH STATION.

CHALMERS K. McCLELLAND, Superintendent.
ANDREW D. COLLIVER, Assistant in Agriculture.
JESSE L. PELHAM, Assistant in Horticulture.
JAMES A. MILHAM,[3] Assistant in Animal Husbandry.
GEORGE K. HELDER, Secretary.

1. Since January 1, 1908.
2. Since February 1, 1908.
3. Since April 1, 1908.

THE COLLEGE BAND.

The following is the roll of the College Band for the year 1907-'08:

R. H. BROWN, DIRECTOR.
R. R. HAND, Drum-major.
J. C. MCCANLES, Principal Musician.

Sergeants: CHAS. MCKIRAHAN, G. BARTHOLOMEES, D. D. GRAY, GEO. MAY, L. L. SHAW.

Corporals: J. H. BENDER, CHAS. MYSZKA, R. H. REYNOLDS, F. KREAMER, T. PARKER, M. COLLINS, JOE VALE.

Piccolo:
R. M. Page.

Clarinets:
Chas. McKirahan.
H. P. Bates.
H. E. Hershey.
J. Carnahan.
J. H. Bender.
J. Tinkham.
E. Reaume.
C. McIntosh.
F. Harrison.
C. Gibson.
J. J. Price.
L. E. Meyer.

Saxophones:
F. Kramer.
G. Bartholomees.
L. L. Shaw.

Bassoon:
L. Davis.

Cornets:
J. C. McCanles.
C. Marty.
C. Tucker.
P. V. Kelley.
J. Vale.
K. Phillips.
I. Ingraham.
F. Carle.

Baritones:
M. Dietrich.
V. Buck.

Horns:
Geo. May.
R. H. Reynolds.
I. Howenstine.
E. Skillman.
R. E. Blair.
N. Melbert.

Trombones:
J. McClung.
W. King.
M. Collins.
V. Florell.
C. Myszka.
D. Crowther.
F. Robinson.

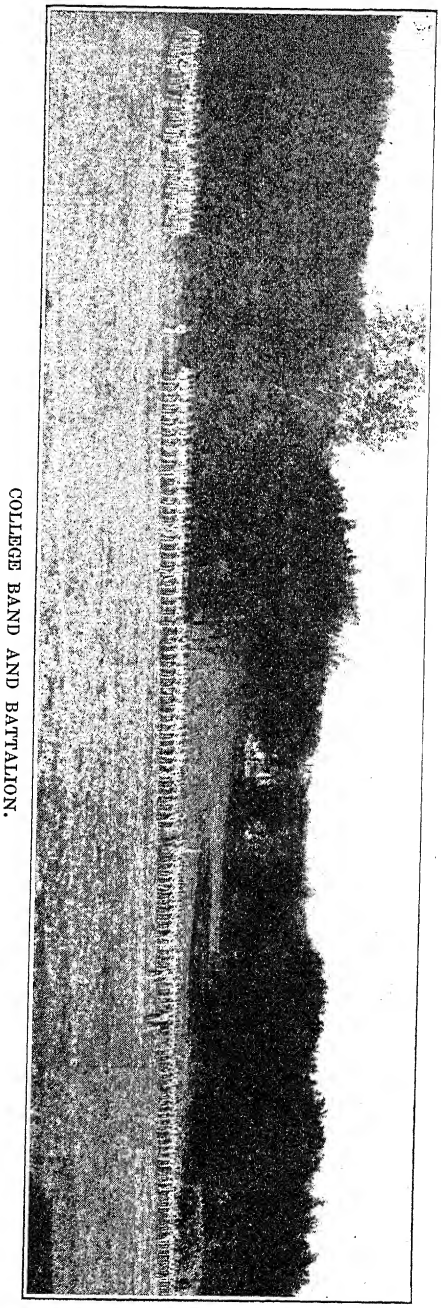
Euphonium:
G. S. Christy.

Basses:
A. W. Seng.
D. Walters.
T. Parker.
C. Sterling.
H. Reppert.

String Basses:
H. E. Overholt.
G. Neill.

Drums:
D. D. Gray.
K. March.
W. Ross.
E. Kittell.

Librarian:
Chas. McKirahan.



COLLEGE BAND AND BATTALION.

THE COLLEGE BATTALION.

The following is a roster of the commissioned and non-commissioned officers of the Kansas State Agricultural College Corps of Cadets for 1907-'08:

FIRST LIEUT. CHARLES H. BOICE, Seventh United States Cavalry, Commandant of Cadets.

STAFF.

BRUCE S. WILSON..... Cadet First Lieutenant and Adjutant.
ANTON HANSON ..... Cadet Second Lieutenant and Quartermaster.
FLOYD E. WILSON..... Cadet Sergeant-major.
TELIE E. NAFZIGER..... Cadet Quartermaster-sergeant.
PAUL CALVIN ..... Cadet Sergeant and Chief Trumpeter.

RANK.	Company A.	Company B.	Company C.	Company D.
Captain	Elmer A. Bull	Wayne B. Cave	David A. Kratzer	Sol W. Cunningham.
First Lieutenant	John F. O'Connor	Charles E. Cassel	Guy C. Rexroad	Malcolm C. Sewell.
Second Lieutenant	Rudolph B. Nelson	William F. Droge	Joe G. Lill	Earl L. Edwards.
First Sergeant	Harry W. Hanson	Russel E. Lawrence	Richard C. Schuppert	Raymond Shuyler.
Sergeants	Dale V. Payton	Louis B. Michel	Ralph W. Evans	Burgess W. Roberts.
	Vern A. McCall	Frotz F. Harri	John T. Wilson	Leo E. Duehn.
	Charles E. Randells	Joseph H. Coffman	Roy M. Johnson	Ernest O. Sechrist.
	Robert C. Johnston	Clyde R. Stevens	Francis Weber	Andrew J. Wheeler.
Corporals	Harry Harbecke	Edward E. Truskett	Charles A. Hazzard	Loren I. Fowler.
	Barrett L. Halderman	Arthur Kahl	Charles B. Moore	Rush D. Laughlin.
	Harold D. O'Brien	Thomas E. Clark	DeForest Hungerford	Harry W. Carr.
	Arthur J. Ostland	Glen A. Bushey	Paul D. Guy	Clarence Wheeler.
	Walter W. Strite	Clyde McKee	Tom Kennett	William D. Shuler.
	Chester F. Turner	Roscoe A. Branson	William C. Hosick	Clarence G. Fry.
		Roy D. Laflin		
Musicians	Carl B. Butler	Stephen Holyroyd	Dwight L. Miller	Carl H. Reed.
	Glen R. Blain	Harry E. Hershey	Charles W. Hickok	John M. Coons.

HISTORY AND RESOURCES.

THE income of the College is derived from two sources—national and state. The original land-grant act was signed by President Lincoln July 2, 1862. This act appropriated 30,000 acres of land for each senator and representative in Congress. Under the provisions of this act this state was to receive 90,000 acres. The amount actually received was 82,315.52 acres. This land was to be sold and the proceeds to be a permanent endowment, to be invested in bonds bearing not less than five per cent. interest. The amount of this endowment is $492,381, "the interest of which shall be inviolably appropriated by each state which may take and claim the benefit of this act to the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

The income derived from this endowment since 1880 is given in the column headed "Interest Fund," page 19.

Under this act, the state of Kansas, in 1863, established the State Agricultural College, by endowing Bluemont College, which had been erected two miles from Manhattan, under the auspices of the Methodist Episcopal church, but was presented to the state for the purpose named in the act of Congress.

In 1873 the College was reorganized upon a thoroughly industrial basis, with prominence given to agriculture and sciences related thereto; and in 1875 the furniture and apparatus of the College were moved to the farm of 223 acres, one mile from the city of Manhattan.

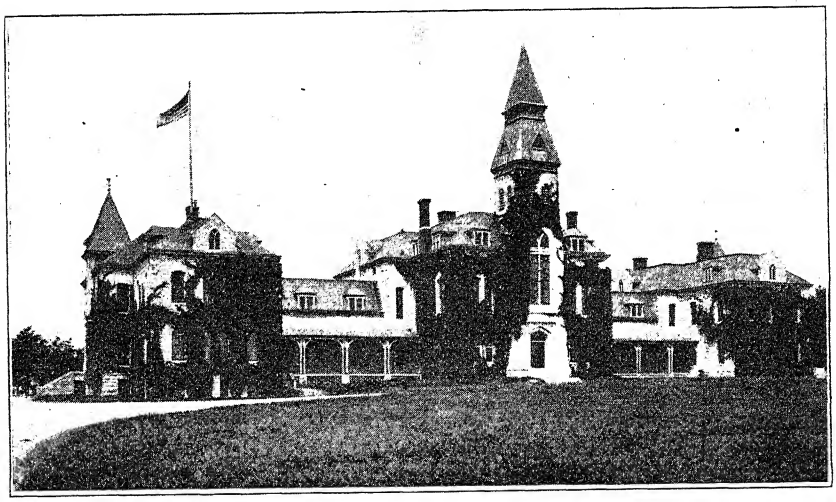
In March, 1887, Congress passed the "Hatch bill," which provided for the organization in each state of a station for agricultural experiments, and gave to each an annual appropriation of $15,000 for this purpose. See "Experiment Station," page 26.

On August 30, 1890, another act was passed by Congress, known as the "Morrill bill." It provided for an annual appro-

priation, beginning with $15,000 for year ending June 30, 1890, with an annual increase for ten years of $1000 over the preceding year, the annual amount thereafter to each state to be $25,000. This money is "to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic sciences, with especial reference to their applications in the industries of life, and to the facilities for such instructions."

The Adams act, of 1906, gives the experiment stations $5000 for that year, this amount to be increased $2000 per year till it becomes $15,000.

An act of 1907 adds $5000 to the support of the agricultural colleges for the fiscal year ending June 30, 1908, this to be increased $5000 each year till the total is $25,000.

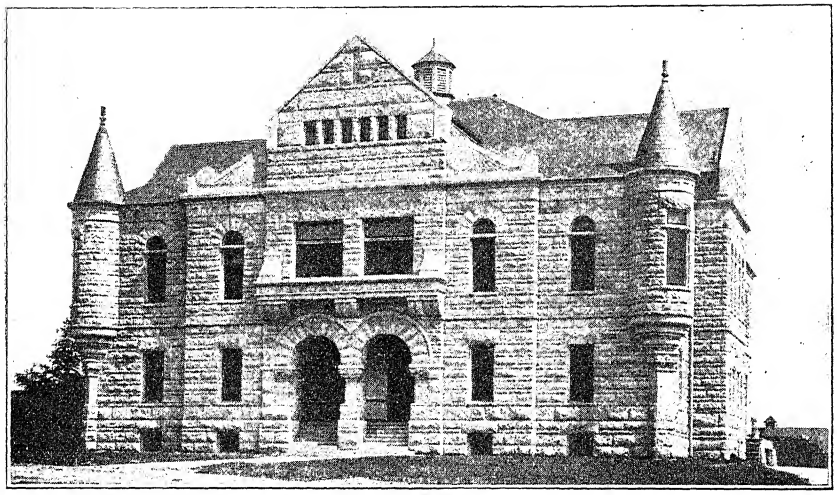


ANDERSON (MAIN) HALL.

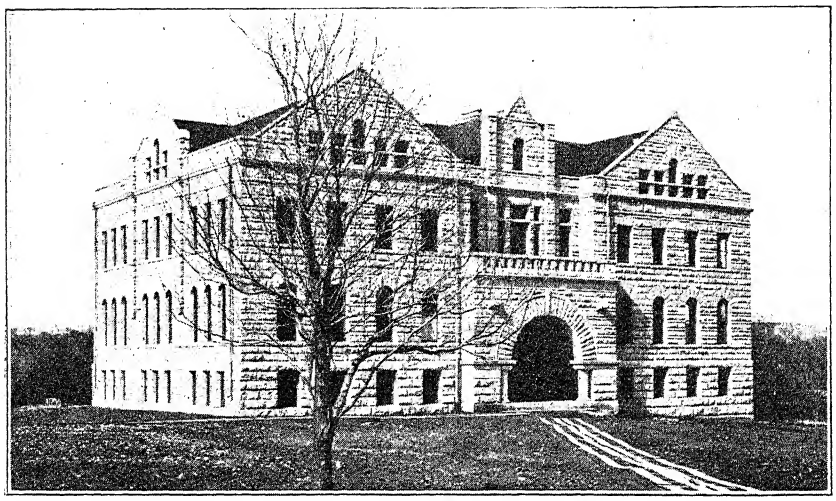
TABULATED FINANCIAL EXHIBIT.

FISCAL YEAR.	STATE APPROPRIATIONS.								Inventory increase.	Expense.	NATIONAL APPROPRIATIONS.			Enrolment.	Graduates.
	Miscellaneous.	Current expense.	Water and coal.	Repairs.	Library.	Equipment.	Buildings.	Totals.			Interest fund.	Morrill fund.	Experiment Station.		
1863–'80							$45,645	$155,802	$86,009						56
1880–'85	$22,592[1]			$1,800	$3,000	$2,950	52,550	60,250	96,948	$154,566	$138,790			1,723	60
1885–'86				700		600	10,000	11,300	34,721	45,827	38,595			428	21
1886–'87				1,400			4,100	5,500	12,910	38,788	32,253			481	21
1887–'88	2,264[1]			1,000	1,000	4,700	8,817	15,517	16,597	35,768	32,331		$15,000	472	22
1888–'89	3,000[2]			1,000	1,000	2,500		7,500	10,334	32,027	31,686		15,000	445	25
1889–'90			$1,425	1,900	1,000	2,900	1,000	8,225	8,732	29,892	34,131		15,000	514	27
1890–'91			1,649	1,200	1,000	2,950		6,799	6,857	43,330	28,765	$31,000	15,000	593	52
1891–'92	3,000[3]		325	3,050	250		4,000	10,625	15,219	50,722	29,654	17,000	15,000	584	35
1892–'93			500	1,500	250			2,250	18,381	57,012	30,187	18,000	15,000	587	39
1893–'94			484	1,000			74,000	75,484	7,846	54,989	29,761	19,000	15,000	555	39
1894–'95			190				2,000	2,190	79,736	51,156	29,390	20,000	15,000	572	57
1895–'96	1,625[3]		1,995	4,300	999	5,057	3,480	17,456	13,933	51,928	26,988	21,000	15,000	647	66
1896–'97		$10,100	2,084	1,300	1,000	550	1,300	16,234	157	51,500	28,669	22,000	15,000	734	55
1897–'98	629[4]	5,000	2,000	1,700	1,000	3,200	16,599	30,128	16,171	56,516	27,677	23,000	15,000	803	69
1898–'99		5,000	2,000	1,000		1,050		9,050	2,993	63,704	29,549	24,000	15,000	870	53
1899–1900	7,360[5]	10,000	2,250	3,000	1,500	22,240	43,500	89,850	45,582	56,956	25,160	25,000	15,000	1,094	58
1900–'01	18,993[6]	10,000	2,250	3,000	1,500			35,743	3,380	65,822	30,910	25,000	15,000	1,321	60
1901–'02	4,130[7]	25,000	2,800	3,000	1,500	9,100	75,000	120,530	79,917	73,467	25,371	25,000	15,000	1,396	52
1902–'03	4,130[7]	30,000	2,800	3,000	1,500	8,500	10,000	59,930	47,234	91,891	22,970	25,000	15,000	1,574	54
1903–'04	15,830[8]	40,000	5,000	5,000	1,500	18,500	65,000	150,830	82,490	86,631	25,688	25,000	15,000	1,605	102
1904–'05	5,330[9]	50,000	3,500	5,000	1,500	18,500	5,000	88,830	30,626	132,605	25,648	25,000	15,000	1,462	107
1905–'06		90,000					42,000	132,000	64,906	145,318	31,276	25,000	15,000	1,690	96
1906–'07		100,000					28,000	128,000	54,944	163,179	29,812	25,000	20,000	1,937	117
1907–'08	5,500	140,000				14,500	140,000	300,000				30,000	22,000		
1908–'09	6,000	155,000				8,000	80,000	249,000				35,000	24,000		
Totals								$1,888,523							

[1] To restore endowment (not included in totals). [2] Water-mains and sewer.
[3] $1500 cadet uniforms, $125 sewers. [4] Rent president's house.
[5] $2000 farmers' institutes, $1800 salary state veterinarian, $3000 sewer, $500 rent president's house.
[6] $2000 farmers' institutes, $1800 salary state veterinarian, $300 rent president's house, $14,893 deficiency June 30, 1899.
[7] $2000 farmers' institutes, $1800 salary state veterinarian, $330 rent president's house.
[8] $2000 farmers' institutes, $2000 salary state veterinarian, $330 rent president's house, $10,500 purchase of land, $1000 contingent fund.
[9] $2000 farmers' institutes, $2000 salary state veterinarian, $330 rent president's house, $1000 contingent fund.



AGRICULTURE HALL.



HORTICULTURAL HALL.

GROUNDS AND BUILDINGS.

THE College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing toward the city, are beautiful in location. The grounds include an irregular plat in the midst of a fine farm, with orchard, vineyard and sample gardens attached, the whole being surrounded by durable stone walls. The grounds are tastefully laid out and extensively planted according to the design of a professional landscape-gardener, while well-graveled drives and good walks lead to the various buildings. All these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation-rooms are excellently lighted and ventilated, and are heated by steam or hot water. A complete system of sewerage has been provided. The College owns 430 acres of land, valued at $50,000, and leases 150 acres additional. The greater portion of these 580 acres is devoted to experiments.

ANDERSON (MAIN) HALL is 152 x 250 feet in extreme dimensions, arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices of the President and Secretary, cloak-room, studies, chapel, post-office, and offices and classrooms of the departments of architecture and drawing, mathematics, oratory, English, and preparatory. Cost, $79,000. The value of the equipment and apparatus in this building is as follows: Executive, $6503; architecture and drawing, $2600; mathematics, $1552; economics, $126; English, $154; preparatory, $40.

MECHANICS HALL contains the following rooms, forming a connected structure: Wood shop, two stories, 40 x 103 feet. The upper floor contains office and drafting-room for the department of mechanical engineering. The lower floor contains benches for 220 students, and complete set of wood-working machinery and tools. Machine-shop, 40 x 80 feet; blacksmith shop, 40 x 50 feet; iron foundry, 40 x 50 feet; brass foundry, 16 x 30 feet; pipe-fitting room, 19 x 50 feet; engineering laboratory, 35 x 40 feet; power-room, 35 x 40 feet; boiler-room, 40 x 75 feet. Cost of buildings, $33,125; value of equipment, $37,031.

GYMNASIUM, one story, 35 x 110 and 46 x 75 feet of floor space, is in form of a cross. It contains a drill-room 46 x 75 feet, a large classroom, cloak-room, dressing-room, toilet-room, ten bath-rooms, and two offices. Cost, $10,000. Value of equipment, $699.

ARMORY, 46 x 95 feet, is a two-story building. This building, which has served many purposes, is now fitted below for an armory and drill-room, and offices of military department. The upper floor will be used for band practice and preparatory classes. Cost of building, $11,250. Value of equipment and apparatus: Military, $126.

FAIRCHILD (LIBRARY) HALL is 100 x 140 feet, three and four stories high. This building provides permanent quarters for the library, with ample reading-rooms and offices, classrooms and laboratories for the departments of entomology and zoölogy, a classroom and office for the department of history and civics and philosophy, general museum, and rooms for the various literary societies. Cost of building, $67,750. Value of equipment and apparatus: History and civics, $175; entomology and zoölogy, $10,687; philosophy, $255.

KEDZIE HALL is 84 x 70 feet, two stories and basement. The first floor and basement will be used by the printing department; the second floor by the drawing department. Cost of building, $15,000. Value of apparatus: Printing, $6588.

AGRICULTURAL HALL, 90 x 95 feet, with its two stories and basement, contains offices, classrooms and laboratories for the departments of agriculture and animal husbandry. Cost of building, $25,000. Value of equipment: Agronomy, $16,870; animal husbandry, $24,611.

PHYSICAL SCIENCE HALL is 96 x 166 feet, and its two stories and basement contain offices, classrooms and laboratories for the departments of chemistry, and physics and electrical engineering. It is heated by both direct and indirect radiation, thus insuring perfect ventilation. Cost of building, $70,000. Value of equipment: Chemistry, $16,194; physics and electrical engineering, $19,793.

AUDITORIUM is 113 x 125 feet, and has a seating capacity of 3000. It contains offices and music-rooms for the music department. Cost of building, $40,000. Value of equipment, $4292.

DOMESTIC SCIENCE AND ART HALL is 92 x 176 feet, having two stories and basement. The basement and first floor contain

classrooms, laboratories and offices for the domestic science department; the second contains sewing-rooms and offices for the domestic art department. Cost of building, $70,000. Value of apparatus and equipment: Domestic science, $2430; domestic art, $970.

VETERINARY HALL is 113 x 155 feet, having two stories and basement. It contains demonstration-rooms, classrooms, laboratories and offices for the departments of veterinary science and bacteriology. Cost of building, $56,000. Value of apparatus and equipment: Veterinary science, $8207; bacteriology, $2450.

DAIRY HALL is 72 x 103 feet, one story and basement. It contains office, classroom, butter-manufacturing room, cheese and cheese-curing rooms, hand-separator room, laboratory, and refrigerator. Cost of building, $15,000. Value of equipment, $12,621.

HORTICULTURAL HALL is 72 x 116 feet, having basement, two stories, and attic. The basement and first floor contain classrooms, laboratories and offices for the horticultural department; the second floor contains similar rooms to be used by the botanical department. The attic will provide rooms for horticultural and botanical museums. Cost, $50,000. Value of equipment and apparatus: Horticulture, $20,164; botany, $15,986.

HORTICULTURAL LABORATORY contains offices, workroom, five propagating houses, and insectary. Cost, $5000.

THE GRANARY is 40 x 50 feet, having basement, two stories, and attic. It contains a thrashing-floor, drying-room, office, and bins for the many varieties of corn, wheat, oats, barley, etc. Cost of building, $5000.

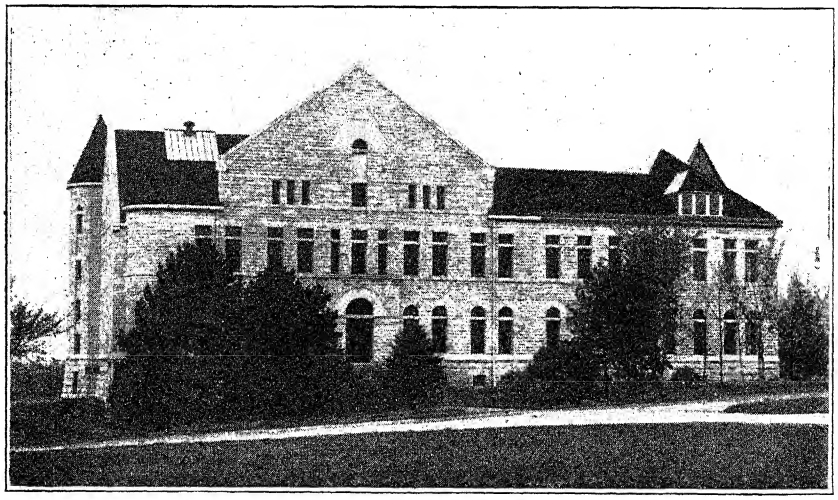
THE FARM BARN is a double but connected stone structure, 50 x 75 feet and 48 x 96 feet, with an addition of sheds and experiment pens 40 x 50 feet. The south wing, 48 x 96 feet, is the stock-judging room, having a seating capacity of 350. A basement underlies the entire structure. Cost, $10,831.

THE DAIRY BARN, 40 x 175 feet, is fitted up with modern swinging stalls for eighty head of cows, arranged in two rows, with driveway between. Cost of building and equipment, $4000.

THE HORTICULTURAL BARN is a stone building, containing storeroom, granary, and stables for several horses. Cost, $1000.

THE COLLEGE LIBRARY is one of the most important supplements to classroom instruction. It consists of 35,064 bound volumes and about 18,000 pamphlets. These books are mainly kept in a general library, but many volumes of technical character are withdrawn and held in departmental libraries. All of the books are indexed in card catalogues, which show their author, title, and to a large degree the details of their contents; also their location. Students are allowed free access to the shelves, a privilege and a source of culture that are given in perhaps no other library of its size in the country. Students may draw books for home use under simple and liberal regulations. The library is open daily, except on legal holidays, from seven A. M. to six P. M., and the librarian or an assistant is in constant attendance during this period to assist those who use the books. By all these means the library is used to the fullest exent and is of inestimable value.

The College subscribes for the leading literary, scientific and agricultural journals, while the principal daily and weekly papers of Kansas, and many from other states, are received in exchange for the College publications. All these are kept on file for the use of students and Faculty. The College has been designated as the depository of United States public documents for the fifth congressional district of Kansas, and 3580 volumes have already been received on this account. Value of books and equipment, $70,321.



FAIRCHILD (LIBRARY) HALL.

OBJECTS.

This College now accomplishes the objects of its endowment in several ways:

First. It gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are offered in all its departments, while the students are kept in sympathy with the callings of the people.

Second. It teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, physics, botany, entomology, zoölogy and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants and animals themselves illustrates and fixes the daily lessons. At the same time lessons in agriculture, horticulture, engineering and household economy show the application of science; and all are enforced by actual experiment.

Third. It trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm and household departments is made a part of the general education for usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

Fourth. It seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose, farmers' institutes have been organized in nearly every county of the state, in which from one to two members of the Faculty share with the people in lectures, essays and discussions upon topics of most interest to farmers and their families. These institutes have brought the College into direct sympathy with the people and their work, so as to make possible a general dissemination of the truths presented. Members of the Faculty are also prominently connected with the state associations for the promotion of agriculture, horticulture, the natural sciences, and education in general. Correspondence as to farmers' institutes or any question of practical interest in agriculture or related sciences is desired.

The *Industrialist,* published by the College, edited by the Faculty, and furnished to each student, gives a wide circulation to matters of interest in the College.

THE EXPERIMENT STATION.

The Agricultural Experiment Station of the College is organized and maintained under the provisions of what is known as the "Hatch act." It is officially designated as "An act to establish agricultural experiment stations in connection with the colleges established in the several states under the provisions of an act approved July 2, 1862, and the acts supplementary thereto." This was enacted "in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and practice of agricultural science." The law specifies in detail "that it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses for forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable."

The Experiment Station, so established, is an important feature of the College. The experimenting staff consists of the director and the professors of agriculture, botany, chemistry, dairy husbandry, animal husbandry, horticulture, entomology, and veterinary science. The heads of certain important departments of instruction in the College are thus also in charge of the several departments of investigation of the Station, and to a certain extent assistants serve in both capacities. The Experiment Station, therefore, is not definitely localized at the institution, but its work and property are more or less woven in with that of the College. The expenses of the Experiment Station work are separately accounted for, however,

and its property is listed in separate inventories. While this arrangement involves some difficulties, it also possesses many advantages—advantages which are mutual. The College work profits by having the investigations of the Station going on alongside. The Station profits in that it thus obtains, without charge, the use of the College farm, buildings, heat, light, various collections, museums, and in some cases apparatus. The expenses of the Experiment Station are met by an appropriation by Congress of $15,000 per annum, which sum has been increased by the Adams act, of 1906. That year $5000 was paid. This amount is increased $2000 per year till the total becomes $15,000. The aims of the Station may be said to be twofold—those which lead to immediate results, and those the objects of which can be reached only after a series of years. Experiments of the greatest value are often of the latter kind, but if the work of the Station were limited to such, the public would feel that nothing is being accomplished. It is the intention of the Station force to make all of its experiments practical, in the sense that they lead to results which, indirectly if not directly, benefit the agricultural interests of the country.

The Hatch act provides "that bulletins of reports of progress shall be published at least once in three months, one copy of which shall be sent to each newspaper in the state or territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit." The publications of the Station include annual reports, bulletins, and press bulletins.

Since 1889 the annual reports contain no details of experiments, but simply outlines of the work of the year in general in the several departments, and including the financial statements required by law. These annual reports, not being of general interest, therefore, are printed in but small numbers, and sent to libraries and officials only, except on special request.

The bulletins are the means of communicating the results of the Station work directly to the farmers. They are issued in the quantities judged necessary to meet the demand. All investigations are described in them when completed, and they are sent to all on our mailing-lists. During the history of the Station the number issued has averaged about eight per annum.

The press bulletins are issued in limited numbers and sent to the papers, to certain state and county officers, and to a considerable number of public and semipublic institutions. They

are short, readable, and popular, but at the same time accurate, articles on subjects of current interest, and embodying observations and experiments of members of the Station staff. Extra copies of some of them are printed for use in answering inquiries.

Persons desiring to receive the Station bulletins are requested to address Agricultural Experiment Station, Manhattan, Kan. General correspondence in reference to the Station should be sent in the same way, but inquiries concerning any special line of investigation should be sent to the head of the department in charge of such work.

FORT HAYS BRANCH STATION.—Congress, in an act approved March 27, 1900, ceded the Fort Hays military reservation, containing 7597.93 acres, to the state of Kansas, on the condition that the state would establish and maintain there branches of the State Normal School and of the Experiment Station. The state legislature accepted the reservation in an act approved February 7, 1901, and designated a division of the land between the Normal School and the Agricultural College, by which the latter obtained about 3500 acres, including the parts most desirable for agricultural purposes. Situated west of the ninety-ninth meridian, the station will occupy a field entirely different climatically from that of any other station in the country, and the results obtained there ought to benefit a large region extending even beyond the boundaries of the state. Experiments are being tried on a large scale in making tests of varieties and methods of culture, with special reference to the needs of regions with deficient rainfall. Experiments are also made to determine the feeding value of the drought-resisting crops produced. This Branch Station is supported by state appropriations. The funds appropriated by Congress cannot be used for the support of substations.

INDUSTRIAL TRAINING.

This institution is preeminently industrial in its aims, methods, and tendencies. While the pure sciences, mathematics and other studies are rigorously taught, there is constantly present a practical atmosphere which incites the student to an application of the principles taught, and thus lends interest and value to the work. In nearly every term of the four-year course the student gives one hour per day to industrial training of one kind or another. This awakens and deepens sympathy with industry and toil, impresses the student with the essential dignity of labor, thus educating toward the industries instead of away from them, and lays a good foundation for a life-work in industrial and technical lines. Even should stu-

dents not all return to the farm, the shop, or to housewifery, the wider knowledge afforded them and the broader sympathies engendered cannot but redound to their good, and to the advantage of society at large and the industrial classes in particular.

Throughout the first year young men take their industrial in the shops. They thus get a familiarity with tools and methods which enables them to do the wood- and ironwork commonly needed on the farm, and which is useful to all everywhere. The young women take sewing during the first year, and a certain amount of cooking practice. The utility of this needs no argument. After the first year there are differences in the industrial requirements corresponding to differences in the several courses of study. In the domestic science course the various lines of household art constitute almost the entire industrial work. In the mechanical engineering course shop work in one or another of its varous kinds is required every term. In the agricultural course the industrials include practical instruction in the fields, orchards, gardens, and dairy, and in feeding.

The labor of students during assigned industrial time is not paid for, as its object is educational, and the student receives full value in the training afforded. In all the instruction in industrial lines special attention is given to making the courses systematic ad progressive. Students desiring to give extra attention to such work are allowed every opportunity that the departments can afford. Many students acquire sufficient proficiency to be able to turn their skill to a financial advantage during the latter term of their courses, and all who apply themselves with any diligence obtain a training that cannot fail to be of great benefit to them in after-life. The work of the several industrials will be found described in detail under the individual headings.

DEGREES.

Graduates from any of the four-year courses will be granted the degree of bachelor of science. Students completing the graduate year will be granted a special bachelors' degree indicating the course completed, except in the veterinary course, where the degree will be doctor of veterinary medicine.

The degree of master of science will be conferred in course upon graduates of the College who have received eighteen credits in an approved graduate course, each credit being equivalent to a full study pursued for three months.

Courses will be approved which are in line with any one of the regular undergraduate courses, and include at least six

credits in the biological or the physical sciences, or mathematics, and at least six credits in technical or industrial branches.

The principal line of study shall be designated as the major, and another line as the minor study. As nearly as may be, one-third of the time is to be given to the minor and two-thirds to the major study, including in the latter such scientific, mathematical or technical branches as contribute directly to it. The minor study must fill a logical place in the scheme, so that the work as a whole may possess unity. Three minor credits may be a modern language.

Applications for graduate study shall be passed upon by the committee on graduate courses and referred by them to the Faculty for action. If approved by the Faculty, the candidate shall obtain an assignment at the beginning of each term for the studies intended to be pursued during the ensuing term. At the close of each term examinations shall be given in all branches, and the candidate shall be reported as "passed" or "not passed."

Applications for entrance upon graduate study and for changes in major or minor subjects must be presented to the committee on graduate courses within the first week of a College term.

Non-resident candidates will be required to send to the professors in charge of the departments of their major and minor subjects a full and complete report at the middle and end of each term of the work accomplished within that period. Failure to comply with this requirement will cause the candidate to be dropped from the roll of graduate students, to be reinstated only upon approval of the Faculty. At the end of each term the date, place and manner of the examination of non-residents shall be determined by the instructors concerned.

Upon the completion of the required work, and by the 15th day of May of the year in which the degree is desired, each candidate shall present to the committee on graduate courses, typewritten and in duplicate, a satisfactory thesis involving original work along the lines of his major subject. Thereupon a special examining committee of three shall be appointed from the Faculty, of whom one member shall represent the major subject and another the minor, who shall examine the candidate orally on the subject-matter of his thesis, and report the result of such examination to the Faculty. Upon receipt of the report of this committee, the Faculty will take action concerning the recommendation of the candidate for the degree.

The subject of the thesis must be presented to the committee

on graduate courses for approval by the 1st day of January preceding the commencement at which the degree is desired.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of master of science may be conferred upon the graduates of other colleges of like grade with our own, provided the applicant shall first satisfy the Faculty of his proficiency in the industrial studies distinctive of this institution, on the following conditions:

1. The applicant for the master's degree must be a graduate of at least three years' standing, and a resident of Kansas.

2. His graduate study shall have been in line with that required of graduates of this College, as published in our catalogue.

3. He must make application for the degree on or before the 1st day of January preceding the granting of the same. The application must be accompanied with a statement of his course of study, the work upon which the claim for the degree is based, and the subject selected for his thesis.

4. By April 1, an abstract of the thesis must be submitted to the Faculty.

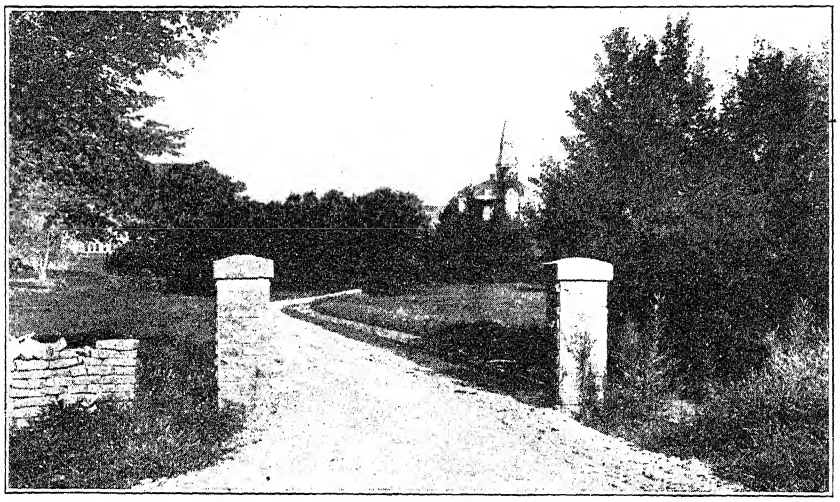
5. Before May 15, the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.

COURSES OF STUDY.

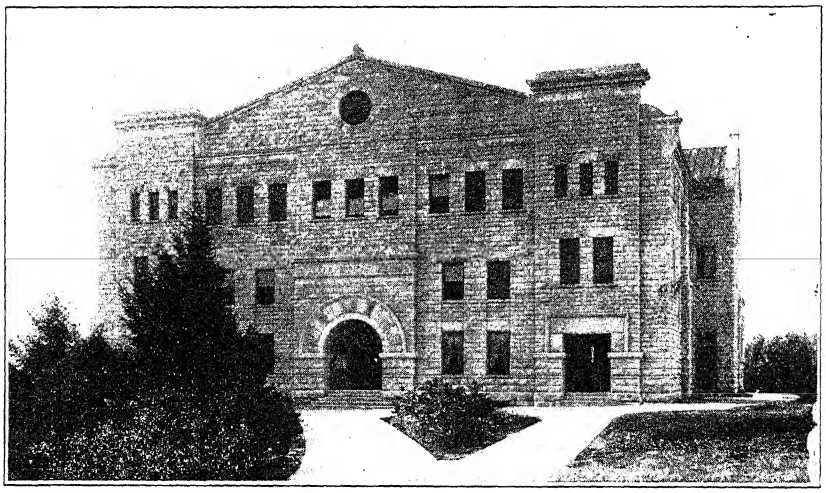
With a view of providing for the wants of the various classes of students, the following courses of study are offered:

1. Four-year courses in (*a*) agronomy, (*b*) animal husbandry, (*c*) dairy, (*d*) poultry, (*e*) horticulture, (*f*) veterinary science, (*g*) mechanical engineering, (*h*) electrical engineering, (*i*) civil engineering, (*j*) architecture, (*k*) printing, (*l*) domestic science and art, (*m*) general science.

2. Short courses in (*a*) dairying, (*b*) domestic science, (*c*) agriculture.



MAIN ENTRANCE.



AUDITORIUM.

FRESHMAN YEAR—*All Courses.*

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

FALL TERM:

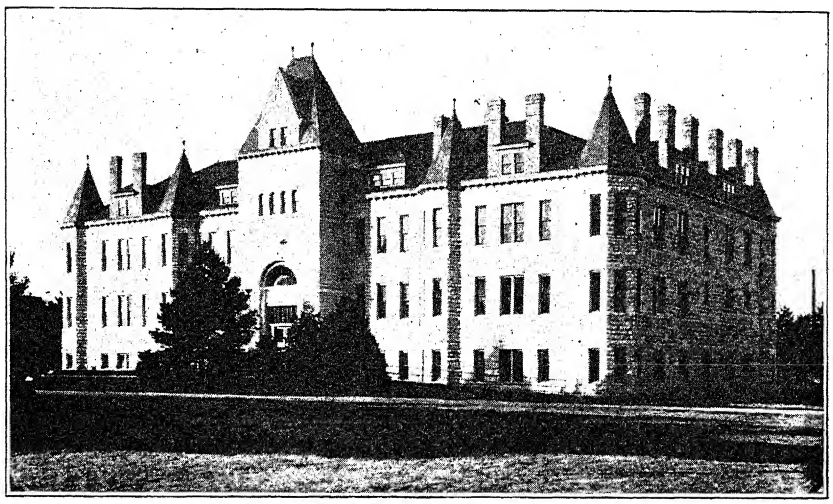
Classics	5	–	88
Geometry I.	5	–	102
Physics I.	5	2	118
El. Psychology	1	–	115
Freehand Drawing	–	4	68
Woodwork I *or*.	–	4	103
Sewing I.	–	4	81
Drill *or*.	–	4	111
Phys. Tr.	–	4	117

WINTER TERM:

Advanced Composition.	5	–	88
Geometry II.	5	–	102
Physics II.	5	4	118
Object Drawing	–	4	68
Woodwork II *or*.	–	4	103
Sewing II	–	4	82
Drill *or*.	–	4	111
Phys. Tr.	–	4	117

SPRING TERM:

Rhetoric I.	5	–	88
Trigonometry	5	–	102
Surveying *or*.	–	–	77
Color and Design I.	–	4	69
Agriculture *or*.	5	–	61
Cooking	5	–	83
Geometrical Drawing.	–	4	68
Blacksmithing I *or*.	–	4	103
Sewing III	–	4	82
Drill *or*.	–	4	111
Phys. Tr.	–	4	117



PHYSICAL SCIENCE HALL.

AGRONOMY COURSE.

This is an age of specialists, yet the specialist is far better equipped for his life-work if he is well grounded in the fundamental branches of knowledge. The College is better equipped than ever before, in the special lines of agriculture, horticulture, and animal husbandry and dairying, for giving the student thorough preparation and training in these lines. The sciences which are related to agriculture are not slighted, and all of the essential fundamental studies are given.

The young men who take the agronomy course will not only be well prepared successfully to carry on various lines of farming for themselves, but they will be competent to act as foremen, and, after some experience, as managers and superintendents of large farms or other agricultural interests. They will also be prepared to take positions in our agricultural colleges and experiment stations as instructors and assistants. More than this, the graduate from the agriculture course, whatever calling he may choose or wherever he may make his home, will be a strong and influential citizen as well as a skilful producer, because, while the studies of the agriculture course are primarily practical, emphasizing the business side of life, yet enough "culture" studies are offered to give the student a well-balanced and well-rounded education.

It is not so easy to make a good living at farming to-day as it was forty or even twenty years ago. The soil is poorer, competition is greater. There are many educated, hustling men engaged in the various lines of farming to-day, and if you want successfully to compete with them you must be educated, too. You must understand the soil and the great principles of cultivation, aeration, and soil-moisture conservation. You must know the science of plant growth and propagation; you must know the chemistry of the plant and of the soil. You must learn the principles of animal nutrition and balanced rations in stock-feeding. You must study the animal and be practiced in stock judging, in order to select your breeding stock. You must know a thousand things about agriculture which you may not know now, if you hope successfully to compete with those who have knowledge and training in these things.

The motto of the Agricultural College is *practice with science.* This does not mean, however, that the agriculture course student is put to work on the farm. The agriculture course is a course of study, not manual labor. Some manual labor is required as practice work in the field and laboratory. The student is taught to handle tools in carpentry and blacksmithing; he is given some practice in handling live stock, grafting, tree-planting, and general farm management. He is not sent into the fields to plow, harrow, or cultivate, but he has an opportunity to observe the best methods of farm practice and become acquainted with the great principles af agriculture which apply everywhere and upon which corp production and stock-breeding and stock-raising depend.

Every young farmer in the state of Kansas should take one of the agriculture courses. It does not matter so much how long a man lives, as how much he lives, and one can live so much more and accomplish so much more after spending four years in College that the time spent is never missed. Every young man can find means to carry him through College. "Where there 's a will there 's a way."

Agronomy Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Chemistry I	5	4	74
Zoölogy I	5	4	93
Dairying	5	4	80
Drill	–	4	111

WINTER TERM:

Chemistry I and II	5	4	75
Entomology I	5	4	94
Horticulture	5	4	98
Drill	–	4	111

SPRING TERM:

Chemistry II and III	5	4	75
Live Stock I	2½	4	67
Farm Equipment	5	–	92
Public Speaking I	5	–	125
Drill	–	4	111

JUNIOR.

FALL TERM:

Bacteriology I	2½	4	70
Plant Anatomy	5	4	72
Agricultural Chem. I	2½	6	76
Geology	5	–	94

WINTER TERM:

Animal Nutrition	2½	–	76
Plant Physiology	5	4	72
Rhetoric II	5	–	88
Soil Physics I	2½	4	62
Agr. Chem. Lab. II	–	4	76

SPRING TERM:

Civics	5	–	97
Crop Production I	5	6	63
Stock Feeding	5	–	67
Poultry	2½	2	120

SENIOR.

FALL TERM:

American History	5	–	97
Farm Motors	2½	4	108
Soil Physics II	2½	6	62
Physiology	5	2	128
Thesis	–	3	

WINTER TERM:

Economics	5	–	85
Philosophy	5	–	115
Farm Management	2½	2	64
Crop Production II	2½	6	64
Thesis	–	5	

SPRING TERM:

Diseases of Fm. Anim'ls,	5	–	126
Plant Breeding	5	–	73
Soil Fertility	2½	4	63
English Literature	5	–	88
Thesis	–	4	

GRADUATE.

FALL TERM:

Modern Language I	5	–	96
Elective in Agronomy	5	–	65
Elective	5	–	59
Public Speaking II	5	–	125

WINTER TERM:

Modern Language II	5	–	96
Elective in Agromony	5	–	65
Elective	5	–	59
Advanced Botany	5	–	73

SPRING TERM:

Modern Language III	5	–	96
Elective in Agronomy	5	–	65
Elective	5	–	59
Agricultural Chem. II	5	4	76

ANIMAL HUSBANDRY COURSE.

Realizing that success in general agriculture depends very largely on the selection of a profitable type of farm animals, this course has been so arranged as to give the student special instructions in the selection, breeding, feeding, marketing and management of all classes of live stock. Attention is also given to sanitary conditions in connection with live stock and treatment of all the more common forms of diseases to which farm animals are subject. The work as outlined in this course is designed to teach the science that underlies practical agriculture. Sufficient English, literature, mathematics, history and other supplementary studies are maintained to give both a scientific and practical training, and to develop a student in this course to the level of any other profession. Many positions are open to young men with thorough training along this line of work, such as teachers, managers of live-stock farms and ranches, field men for agricultural publications, commission-house buyers and sellers, government work, and many others. It is the intention to make broad-minded, influential citizens of the students of this department as well as the most successful live-stock men of the country.

In the fall term of the fifth year an opportunity is given the student to do original experimental work. He may largely choose this work along any particular line in which he may be interested, the object being to acquaint him with the details of scientific experimental work.

Meat production during the winter term of the fifth year is a study of the most economical and practical methods of producing beef, mutton and pork, together with the study of the most scientific methods of killing and curing and storing meats, both on the farm and in the large packing-houses.

A five-hour period during the spring term of the fifth year is open as an elective. Here the student may select work along some special line of live stock in which he may be interested.

PRIZE SHORT-HORN HERD.

Animal Husbandry Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Chemistry I	5	4	74
Zoölogy I	5	4	93
Dairying	5	4	80
Drill	–	4	111

WINTER TERM:

Chemistry I and II	5	4	75
Entomology I	5	4	94
Horticulture	5	4	98
Drill	–	4	111

SPRING TERM:

Chemistry II and III	5	4	75
Live Stock I	2½	4	67
Farm Equipment	5	–	62
Public Speaking I	5	–	125
Drill	–	4	111

JUNIOR.

FALL TERM:

Bacteriology I	2½	4	70
Agricultural Chem. I	2½	6	76
Geology	5	–	94
Anatomy I	2½	8	127
Farm Motors	2½	4	108

WINTER TERM:

Animal Nutrition	2½	–	76
Rhetoric II	5	–	88
Bacteriology II	2½	4	71
Soil Physics I	2½	4	62
Zoölogy II	2½	4	93

SPRING TERM:

Stock Feeding	5	–	67
Crop Production I	5	4	63
Civics	5	–	97
Poultry	2½	2	120

SENIOR.

FALL TERM:

Physiology	5	2	128
Economics	5	–	85
American History	5	–	97
Live Stock II	2½	4	67
Thesis	–	4	

WINTER TERM:

Embryology	5	4	93
Philosophy	5	–	115
Farm Management	2½	2	64
Pedigree	–	4	67
Live Stock Management,	2½	–	67
Thesis	–	4	

SPRING TERM:

Animal Breeding	5	–	67
Diseases of Fm. Animals,	5	–	126
English Literature	5	–	88
Obstetrics	5	–	133
Thesis	–	4	

GRADUATE.

FALL TERM:

Modern Language I	5	–	96
Public Speaking II	5	–	125
Principles of Animal Nutrition	5	–	76
Experimental Work	2½	4	

WINTER TERM:

Modern Language II	5	–	96
Origin of Dom. Animals,	5	–	67
Rural Architecture	5	4	68
Crop Production II	2½	6	64

SPRING TERM:

Modern Language III	5	–	96
Soil Fertility	2½	4	63
Meat Production	5	–	67
Elective	5	–	59

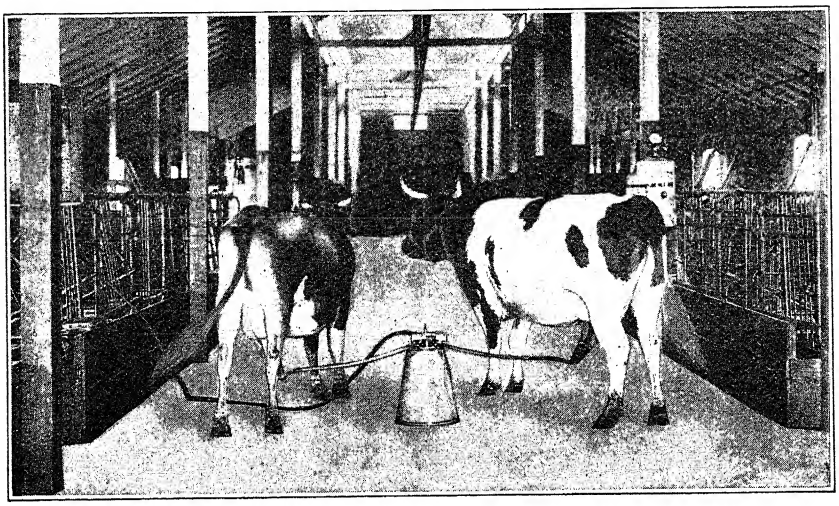
DAIRY HUSBANDRY.

The demand for well-trained men in the different branches of the dairy industry having become so urgent, the wonderful possibilities offered by the state of Kansas for successful dairying, and the extent, value, and rapid development of this industry, has led the Board of Regents to offer courses in dairy husbandry. This is one of the first institutions in the country to offer a separate course and give a degree in this important branch of agriculture. Dairying, in spite of its general neglect, is recognized as being one of the most economical and greatest wealth-producing industries in the country; and each succeeding year only serves to emphasize its importance and to show new possibilities in the dairy business. This tends to create new positions and increases the demand for men who will be leaders in this work.

Much of the future prosperity and success of dairying must rest in the hands of the producer, and to him we must look for our greatest progress. The first object of this course is, therefore, to offer, in addition to a well-grounded liberal agricultural course, such instruction as will be of service and special value to the man who handles the cows. No pains will be spared to make this course as broad, thorough, comprehensive, and practical as it can be made.

To those who care to take the advanced work during the fifth year an opportunity will be given to take such a course as should fit them to take up municipal, state, government, college and research work.

The universal agitation for a pure, wholesome, healthy milk supply for towns and cities, the demand for organizers and managers of testing associations, instructors in traveling dairy schools and institutes, creamery inspectors and instructors, creamery managers, managers of various types of dairy farms, and dairy instructors and investigators in college, state and government employment, call for the services of a great many more men than have received the training and experience which these positions demand. It is the object of these courses to supply the student with this needed information and training, together with a sufficient number of culture and scientific studies to assist him in making the most out of his life and to become a better and more useful citizen of the state.



MILKING MACHINES.

Dairy Husbandry Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Chemistry I	5	4	74
Zoölogy I	5	4	93
Dairying	5	4	80
Drill	–	4	111

WINTER TERM:

Chemistry I and II	5	4	75
Entomology I	5	4	94
Horticulture	5	4	98
Drill	–	4	111

SPRING TERM:

Chemistry II and III	5	4	75
Live Stock I	2½	4	67
Farm Equipment	5	–	62
Public Speaking I	5	–	125
Drill	–	4	111

JUNIOR.

FALL TERM:

Bacteriology I	2½	4	70
Agricultural Chem. I	2½	6	76
Rhetoric II	5	–	88
Anatomy I	2½	8	127

WINTER TERM:

Animal Nutrition	2½	–	76
Civics	5	–	97
Soil Physics I	2½	4	62
Bacteriology II	2½	4	71
Zoölogy II	2½	4	93

SPRING TERM:

Stock Feeding	5	–	67
American History	5	–	97
Crop Production I	5	6	63
Poultry	2½	2	120

SENIOR.

FALL TERM:

Physiology	5	2	128
Economics	5	–	85
Live Stock II	2½	4	67
Butter Making	5	4	80
Thesis	–	2	81

WINTER TERM:

Philosophy	5	–	115
Embryology	5	4	93
Pedigrees	–	4	67
Cheese Making	2½	4	80
Farm Management	2½	2	64
Thesis	–	1	81

SPRING TERM:

English Literature	5	–	88
Animal Breeding	5	–	67
Diseases of F'm Animals,	5	–	
Market Milk and Cr'm	2½	4	80
Dairy Management	–	4	81
Thesis	–	3	81

GRADUATE.

FALL TERM:

Experimental Dairying	5	4	81
Rural Architecture	2½	4	68
Dairy Chemistry	2½	4	86
Elective	5	–	59

WINTER TERM:

Manufacture of Special Dairy Products	2½	4	81
Crop Production II	2½	6	63
Public Speaking II	5	–	125
Elective	5	–	59

SPRING TERM:

Dairy Inspection	2½	4	81
Soil Fertility	2½	4	63
Landscape Gardening	2½	4	98
Dairy Seminary	2½	4	81
Elective	5	–	59

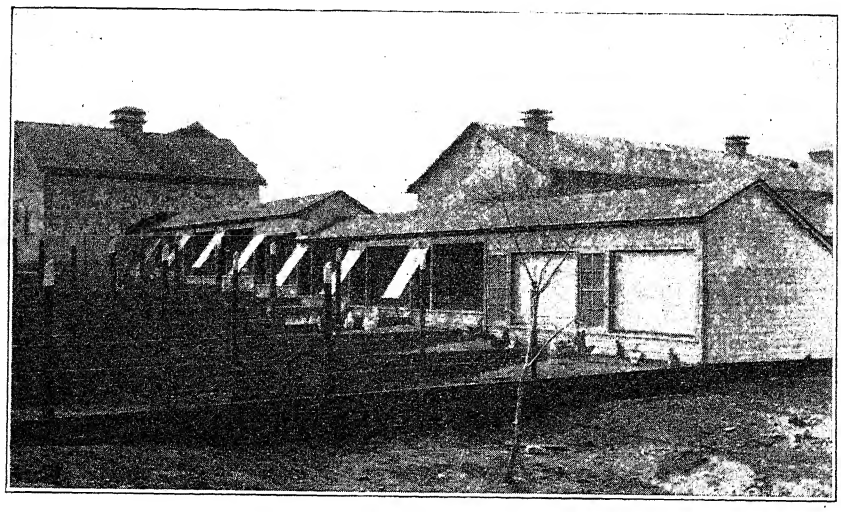
POULTRY HUSBANDRY.

In compliance with the general and growing demand for instruction along the line of poultry husbandry, a new course has been outlined to meet the needs of the farmer, poultry specialist and poultry fancier.

This course permits the student to take special work in poultry husbandry during the third and fourth years of his College course, with the privilege of taking advanced studies and research work during a fifth or graduate year.

The poultry department is equipped with different types of incubators, brooders, poultry-houses, runs, and with flocks of the leading breeds of fowls.

This course starts with the elementary and basic studies underlying poultry culture and treats the subject in a practical, comprehensive manner, combining with lectures and classroom work laboratory practice in the details of practical, successful poultry management.



POULTRY HOUSES.

Poultry Husbandry Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Chemistry I	5	4	74
Zoölogy I	5	4	93
Dairying	5	4	80
Drill	–	4	111

WINTER TERM:

Chemistry I and II	5	4	75
Entomology I	5	4	94
Horticulture	5	4	98
Drill	–	4	111

SPRING TERM:

Chemistry II and III	5	4	75
Live Stock I	2½	4	67
Farm Equipment	5	–	62
Public Speaking I	5	–	125
Drill	–	4	111

JUNIOR.

FALL TERM:

Bacteriology I	2½	4	70
Agricultural Chem. I	2½	6	76
Rhetoric II	5	–	88
Anatomy I	2½	8	127

WINTER TERM:

Animal Nutrition	2½	–	76
Civics	5	–	97
Soil Physics I	2½	4	62
Bacteriology II	2½	4	71
Zoölogy II	2½	4	93

SPRING TERM:

Stock Feeding	5	–	67
American History	5	–	97
Crop Production I	5	6	62
Poultry	2½	2	120

SENIOR.

FALL TERM:

English Literature	5	–	88
Economics	5	–	85
Live Stock II	2½	4	67
Poultry Husbandry I	5	4	120

WINTER TERM:

Philosophy	5	–	115
Embryology	5	4	93
Poultry Husbandry II	5	4	120
Farm Management	2½	2	64

SPRING TERM:

Diseases of Fm. Animals,	5	–	127
Animal Breeding	5	–	67
Poultry Husbandry III	5	4	120
Thesis	–	10	

GRADUATE.

To be supplied later.

HORTICULTURE AND FORESTRY COURSE.

The object of the study of horticulture in the general, agronomy, animal husbandry, dairy and domestic science courses is to give the student such training in the principles underlying the propagation and general care of horticultural varieties as will enable him to appreciate and successfully grow the vegetables, fruits, flowers and trees that are necessary for the best development of the home, in either city or country. Whatever the occupation or location, the quality of the home determines to a great degree the quality of the citizen, and the home provided with the garden's best products and surrounded by nature's works of art approaches the ideal.

To teach how to grow these is the aim of the department, and the garden, nursery, orchard and campus supplement the text-book by furnishing materials for the student's inspection and observation.

For the student who finds that special lines of horticulture offer a congenial and profitable occupation, the special courses are offered. The preparation work in the sciences which form the foundation for practical, scientific work are for the most part identical with the needs of the student in general agriculture. During the junior and senior years, special technical work may be taken in the lines of fruit-growing, floriculture, forestry and landscape-gardening.

There is opportunity in each line for men who can do things right, and the object of these special courses is to familiarize the students with the practical and scientific way to do them.

In the work of pomology, the student studies the tree and the fruit; the soil that produced them; the insects and the fungi that affect them, and the means of their control. Methods of packing, shipping, storing and marketing are studied and discussed. The successful fruit-grower is the one who has learned to think definitely and accurately concerning his operations, and the spirit of this course is one of research and study rather than of formula.

The courses in floriculture and landscape-gardening aim to give the student knowledge of the methods of work necessary for success. Acquaintance with his materials and the uses others have made of them is essential for success.

In the forestry course instruction is offered that will equip the student with a thorough knowledge of the importance of the subject, and acquaint him with the methods used in the best systems of economical work. An acquaintance with trees and their products is essential. The plantations of the College and the Experiment Station, and the department museum, furnish opportunity for forestry practice and laboratory research.

The work of the graduate year is intended to equip the student for employment offered by government service and lumber corporations.

Horticulture and Forestry Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Chemistry I	5	4	74
Zoölogy I	5	4	93
Dairying	5	4	80
Drill	–	4	111

WINTER TERM:

Chemistry I and II	5	4	75
Entomology I	5	4	94
Horticulture	5	4	98
Drill	–	4	111

SPRING TERM:

Chemistry II and III	5	4	75
Live Stock I	2½	4	67
Farm equipment	5	–	62
Public Speaking I	5	–	125
Drill	–	4	111

JUNIOR.

FALL TERM:

Bacteriology I	2½	4	70
Plant Anatomy	5	4	72
Geology	5	–	94
Agricultural Chem. I	2½	6	76

WINTER TERM:

Civics	5	–	97
Plant Physiology	5	4	72
Soil Physics I	2½	4	62
Agricultural Chem. II	–	4	76
Animal Nutrition	2½	–	76

SPRING TERM:

Plant Pathology I	5	4	73
Stock Feeding	5	–	67
Crop Production I	5	6	63
Poultry	2½	2	120

SENIOR.

FALL TERM:

American History	5	–	97
Economics	5	–	85
Entomology II	2½	4	
Pomology I *or*	–	–	98
Forestry I	5	4	98
Thesis	–	2	

WINTER TERM:

Rhetoric II	5	–	88
Philosophy	5	–	115
Farm Management	2½	2	64
Fruit Growing *or*	–	–	99
Dendrology	5	4	100
Thesis	–	4	

SPRING TERM:

English Literature	5	–	88
Plant Breeding	5	–	73
Veg. Gardening and	2½	4	98
Landscape Gardening *or*	2½	4	99
Silviculture	5	4	100
Thesis	–	4	

GRADUATE.

FALL TERM:

Modern Language I	5	–	96
Public Speaking II	5	–	125
Pomology II *or*	–	–	99
Forestry II *or*	–	–	101
Greenhouse Constr and Heating	– 5	– 8	101

WINTER TERM:

Modern Language II	5	–	96
Plant Pathology II	5	4	73
Prin. of Fruit Growing *or*	–	–	99
Dendrology *or*	–	–	100
Greenhouse Mang.	5	8	101

SPRING TERM:

Modern Language III	5	–	96
Fruit Products	5	4	98
Prin. of L'dsc. Gard'g *or*	–	–	99
Forest Policy *or*	–	–	101
Bedding Plants	5	8	102

VETERINARY SCIENCE COURSE.

The increased number and value of the live stock of Kansas have created a demand in the last few years for first-class veterinarians far in excess of the supply. The breeder of highly bred stock, the large feeder, the farmer, all combine and call for more and better qualified veterinary surgeons; the practicing veterinarians during their busy season cannot do all the work necessary and are asking for more help. The breeder, feeder and farmer all recognize the fact that there is a difference between the "horse doctor" and the veterinarian, and will trust their sick animals in the hands of the former only when the latter is not available. Thus, in the state of Kansas, has the demand for such qualified men been so great that the Board of Regents could no longer resist the pressure, and September 1, 1905, inaugurated a full course of study in veterinary science, fitted specially to the demand of the times, equal in broadness and thoroughness to the best veterinary schools in existence. The wisdom of such a course has already been demonstrated in the work done and the qualification of the graduates, and the fact that the last legislature appropriated $70,000 for a new veterinary science building which will be ready for occupancy by September 1, 1908.

The work is arranged to give instruction along those lines which will insure the graduation of veterinarians thoroughly qualified in every respect. The course, extending over three years, gives the student ample opportunity to obtain a thorough, practical education in veterinary science. It is based upon the principle of giving a thorough foundation before specializing; it thus insures the graduate being fully qualified to enter a wide field of usefulness. It is the aim of the course to provide a thorough education in all branches pertaining to veterinary science, at the same time instructing the student in his duties as an American citizen. The demand for veterinarians all the world over is constantly increasing. To meet this demand this course is made strong in the branches underlying the profession: anatomy, physiology, histology, pathology, materia medica, and bacteriology. Throughout the entire course each student receives personal instruction in the practical and theoretical details of the profession.

The call for up-to-date practitioners has increased greatly the last few years, and a thoroughly qualified practitioner can find scores of locations where he can at once pay his expenses and soon work up an enviable practice—one which, financially, far exceeds that of his brother M. D., who may have been located for years. Socially the standard has been materially raised, and the veterinarian of to-day is held at his true worth.

The course as presented on the opposite page embodies the training necessary to fill the above requirements.

Veterinary Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Anatomy I	2½	10	127
Chemistry I	5	4	74
Histology I	5	4	127
Drill	–	4	111

WINTER TERM:

Anatomy II	2½	6	128
Chemistry I and II	5	4	75
Histology II	2½	4	128
Physiology Comp. I	5	–	128
Drill	–	4	111

SPRING TERM:

Anatomy III	2½	6	128
Physiology Comp. II	5	2	128
Chemistry II and III	5	4	75
Pathology I	5	–	128
Drill	–	4	111

JUNIOR.

FALL TERM:

Anatomy IV	2½	6	129
Pathology II	5	6	129
Materia Medica I	5	–	129
Bacteriology I	2½	4	70
Clinic	–	2	129

WINTER TERM:

Anatomy V	2½	6	130
Bacteriology II	2½	4	71
Materia Medica II	5	–	130
Medicine I	2½	–	131
Surgery I	–	2	131
Public Speaking I	5	–	125

SPRING TERM:

Medicine II	5	–	132
Surgery II	2½	2	132
Rhetoric II	5	–	88
Pharmacy	–	4	132
Live Stock I	2½	4	67
Parasitism	2½	–	95
Clinic	–	*	129

SENIOR.

FALL TERM:

Civics	5	–	97
Medicine III	2½	–	133
Live Stock II	2½	4	67
Dairying	5	4	80
Surgery III	2½	–	133
Physical Diagnosis	–	6	133
Clinic	–	*	129

WINTER TERM:

Medicine IV	5	–	133
Am. Hist.	5	–	97
Stock Feeding	5	–	67
Surgery IV	5	4	133
Clinic	–	*	129
Thesis	–	4	

SPRING TERM:

Infectious Diseases	5	–	133
Medicine V	5	–	133
Obstetrics	5	–	133
Economics	5	–	85
Hematology	–	4	133
Operative Surgery	–	*	133
Clinic	–	*	129
Thesis	–	4	

GRADUATE.

FALL TERM:

Zoölogy I	5	4	93
Chemistry IV	5	4	75
Medicine VI	5	–	134
Eng. Literature	5	–	88
Clinic	–	*	129

WINTER TERM:

Zoölogy II	2½	4	93
Animal Nutrition	2½	–	76
Meat Inspection	5	–	134
Sanitary Medicine	5	–	134
Therapeutics	2½	–	134
Clinic	–	*	129

SPRING TERM:

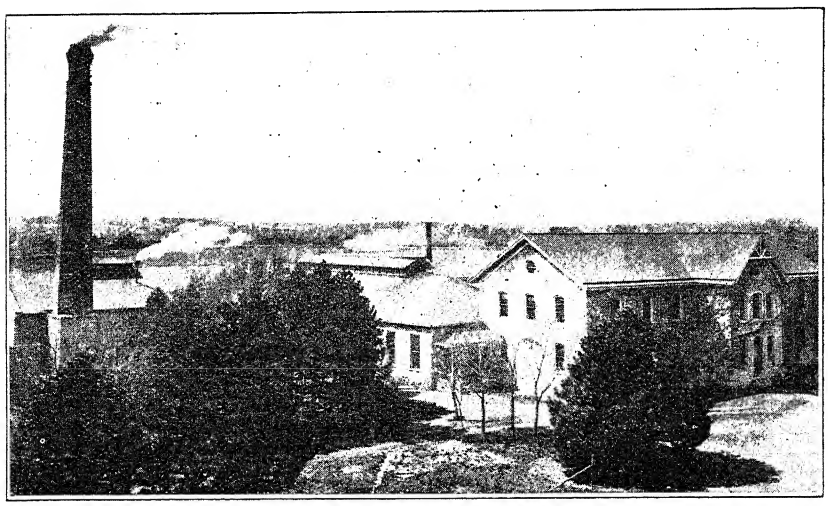
Animal Breeding	5	–	67
Embryology	5	4	93
Surgical Anatomy	5	–	134
Operative Surgery	–	*	132
Clinic	–	*	129

*Number of hours limited only by the amount of work on hand.

MECHANICAL ENGINEERING COURSE.

The course in mechanical engineering is designed to fit its graduates for positions of authority and responsibility in this profession. It prepares for the successful management and superintendence of factories and power plants; for the design of power and machinery installations; for the design and construction of machine tools, steam- and gas-engines, compressors, hydraulic machinery, etc., and for the design and erection of mill and engineering buildings.

The course of study has been laid out with the aim of securing a judicious mixture of theory and practice, such as will not only give the student the technical skill required for engineering operations, but also a broad grasp of the fundamental principles of his profession. The advantages of combining a practical application of principles with theoretical instruction at the time these principles are being impressed by classroom work is well known. The shop work, being purely educational in its character, is so arranged that each student can make as rapid advancement as possible. Instruction is given by skilled workmen, and the work carried on is of a practical character, being, in fact, the building of lathes, engines, drills and machinery for the market and the department. In all shop practice the students work from blue-prints, thus learning to read drawings readily and supplementing the work of the drawing department.



SHOPS.

Mechanical Engineering Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Algebra IV	5	–	102
Descriptive Geometry	5	4	68
Chemistry I	5	4	74
Blacksmithing II	–	4	103
Drill	–	4	111

WINTER TERM:

Analytical Geometry	5	–	102
Public Speaking I	5	–	125
Chemistry I and II	5	4	75
Mech. Drawing I	–	4	103
Foundry	–	4	103
Drill	–	4	111

SPRING TERM:

Differential Calculus	5	–	102
Kinematics I	5	–	104
Chemistry II and III	5	4	75
Mech. Drawing II	–	4	104
Pattern Making	–	4	104
Drill	–	4	111

JUNIOR.

FALL TERM:

Integral Calculus	5	–	103
Kinematics II	5	–	104
Physics II (Mech.)	5	4	118
Mech. Drawing III	–	6	104
Machine Shop I	–	4	104

WINTER TERM:

Rhetoric II	5	–	88
Steam Engineering I (Valve Gears)	5	–	104
Physics IV (Light and Electricity)	5	4	119
Mechanical Drawing IV,	–	6	105
Machine Shop II	–	4	105

SPRING TERM:

Civics	5	–	97
Applied Mechanics I	5	–	105
Physics V (Sound and Heat)	5	4	119
Mechanical Drawing V,	–	4	105
Engineering Labo'tory I,	–	3	105
Machine Shop III	–	4	105

SENIOR.

FALL TERM:

American History	5	–	97
Steam Eng. II (Therm.),	5	–	105
Applied Mechanics II	5	–	105
Mech. Drawing VI	–	4	105
Engineering Lab. II	–	4	105
Graphic Statics	–	3	105
Machine Shop IV	–	4	105

WINTER TERM:

Economics	5	–	85
Steam Eng. III (Boilers),	5	–	106
Applied Mechanics III	5	–	106
Mech. Drawing VII	–	4	106
Mech. Eng., Lab. I	–	6	106
Machine Shop V	–	4	106

SPRING TERM:

English Literature	5	–	88
Steam Eng. IV (Therm.),	5	–	106
Hydraulics I	5	–	107
Mechanical Drawing VIII	–	4	107
Mech. Eng., Lab. II	–	6	107
Thesis	–	–	109

GRADUATE.

FALL TERM:

Modern Language I	5	–	96
Electrical Engineering	5	4	90
Mill and Structural Engineering	5	10	107

WINTER TERM:

Modern Language II	5	–	96
Power Plant Eng	5	6	107
Hydraulics II	5	6	107

SPRING TERM:

Modern Language III	5	–	96
Locomotive Eng	5	8	107
Contracts and Spec	3	–	107
Seminar	2	–	107

ELECTRICAL ENGINEERING COURSE.

The essential elements underlying a sound engineering training are based upon a thorough study of mathematics and the physical sciences. The professional work of this course begins in the third year and continues throughout the course. The graduate year is essentially technical. General-culture subjects are offered during the entire course for the purpose of providing a broad general training, so necessary to ultimate success in engineering.

Emphasis is placed upon training to deal with forces and matter according to scientific principles, rather than in the accumulation of facts. The department laboratories are well equipped with the various measuring instruments, standardizing apparatus, and the different types of dynamo machinery.

The different subjects are presented in the classroom and supplemented by laboratory practice. The course provides a liberal training in wood- and iron-working, mechanical drawing and machine-shop practice. The laboratory experiments selected for the student are designed to give a clear physical conception of the theoretical work of the classroom and a view of the practical field which he is to enter.

During the fourth year extended practice is given in the dynamo laboratory, involving commercial applications of the different types of electrical machinery. Sufficient time is given to the design of electrical machinery to acquaint the student with the fundamental principles of design.

The laboratory equipment has been carefully selected and consists of the leading types of dynamo machinery and a very complete line of standard measuring instruments. Students are given extensive practice in connecting up the different types of machines for testing purposes and for standard commercial work. This practice work and testing extends throughout the senior year, and is intended to give the student familiarity with the underlying principles of the different machines and a knowledge of the care necessary to operate them successfully. Opportunity is also given to undertake the investigation of commercial problems as they are sent to the College from the different central stations of the state.

In connection with the regular work of the classroom and laboratory, extensive references are given to leading books on technical engineering. In connection with the laboratory work a certain amount of library work is required. During the year 1908 a College branch of the American Institute of Electrical Engineers was organized. The branch meets the first Tuesday of each month. At these meetings the instructors meet with the students for the discussion of technical subjects in engineering. Consulting engineers and central-station managers are invited to present papers at these meetings. The student is thus brought directly into contact with engineering progress.

Electrical Engineering Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Chemistry I	5	4	74
Descriptive Geometry	5	4	68
Algebra IV	5	–	102
Blacksmithing II	–	4	103
Drill	–	4	111

WINTER TERM:

Analytical Geometry	5	–	102
Chemistry I and II	5	4	75
Public Speaking I	5	–	125
Foundry	–	4	103
Mech. Drawing I	–	4	103
Drill	–	4	111

SPRING TERM:

Chemistry II and III	5	4	75
Differential Calculus	5	–	102
Kinematics I	5	–	103
Pattern Making	–	4	103
Mech. Drawing II	–	4	104
Drill	–	4	111

JUNIOR.

FALL TERM:

Integral Calculus	5	–	103
Physics III (Mech.)	5	4	118
Rhetoric II	5	–	88
Mech. Drawing III	–	6	104
Machine-shop I	–	4	104

WINTER TERM:

Physics IV (Light and Electricity)	5	4	119
Civics	5	–	97
Applied Mechanics, E. I.,	5	–	108
Mech. Drawing IV	–	6	105
Machine-shop II	–	4	105

SPRING TERM:

Physics V (Sound and Heat)	5	4	119
English Literature	5	–	88
Electricity	5	4	90
D. C. Machine I.	–	3	90
Machine-shop III	–	4	105

SENIOR.

FALL TERM:

American History	5	–	97
D. C. Machine II	5	4	90
Electric Instruments and Calibration	5	4	90
Machine-shop IV	–	4	105
Engineering Lab., E. I.,	–	3	108

WINTER TERM:

Steam Engr., E. I	5	6	108
Alt.-current Mach. I.	5	4	91
Hydraulics I.	5	–	107
Direct-current Design I,	–	2	91
Thesis	–	3	92

SPRING TERM:

Economics	5	–	85
Alt.-current Mach. II.	5	4	91
Alt.-current Design	–	2	92
Power Transmission	2½	–	92
Electric Installation	2½	–	92
Thesis	–	4	92

GRADUATE.

FALL TERM:

Alt.-current Mach. III.	5	4	92
Telephony	5	4	92
Elective	5	–	59

WINTER TERM:

Electrical Traction	5	–	92
Station Design	5	4	92
Elective	5	–	59

SPRING TERM:

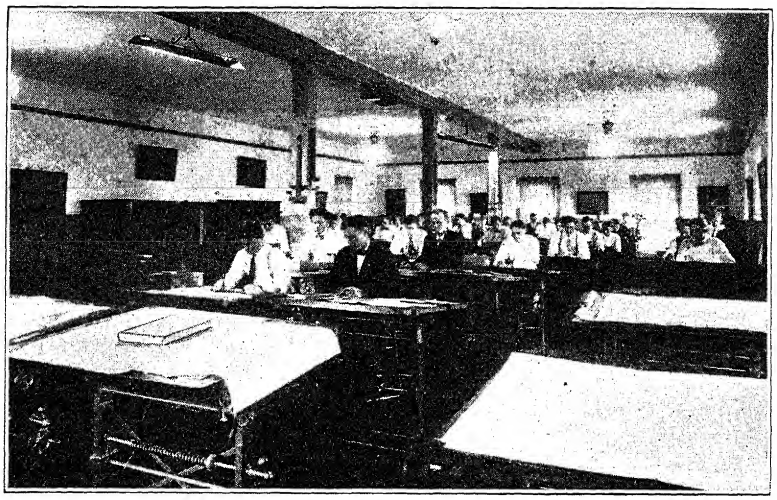
Electric Lighting	5	–	92
Steam Engineering II	5	4	108
Elective	5	–	59

CIVIL ENGINEERING COURSE.

The civil engineering course aims to equip young men to follow one of the several branches of this profession. The scope of civil engineering is so broad that it is not feasible to attempt to make specialists of its graduates, but it is desirable to give them a thorough training in the theory and practice of the fundamental principles of the course. The principles are common to the various branches of the work, and this training will enable the graduate to take up such specialty as his tastes and ability dictate.

Some of the lines of work open to the graduates of the civil engineering course are: Surveying, railroad location and maintenance, municipal engineering, hydraulic power-plant design, bridge and structural design, etc.

As in the other courses, the student's time is divided between the study of principles in the classroom and their applications in the drafting-room, field, and laboratories.



DRAFTING ROOM.

Civil Engineering Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Algebra IV	5	–	102
Descriptive Geometry	5	4	68
Chemistry I	5	4	74
Surveying II	–	4	78
Drill	–	4	111

WINTER TERM:

Analytical Geometry	5	–	102
Public Speaking I	5	–	125
Chemistry I and II	5	4	75
Mech. Drawing I	–	4	103
Surveying III	–	4	78
Drill	–	4	111

SPRING TERM:

Differential Calculus	5	–	102
Kinematics I	5	–	104
Chemistry II and III	5	4	75
Mech. Drawing II	–	4	104
Surveying IV	–	4	78
Drill	–	4	111

JUNIORS.

FALL TERM:

Integral Calculus	5	–	103
Geodesy	5	–	78
Physics III (Mech.)	5	4	118
Mech. Drawing III	–	6	104
Surveying V	–	4	78

WINTER TERM:

Rhetoric II	5	–	88
Spherical Trigonometry,	2½	–	103
Astronomy	2½	–	103
Physics IV (Light and Electricity)	5	4	119
Civil Eng. Draw. I	–	6	78
Surveying VI	–	4	78

SPRING TERM:

Civics	5	–	97
Applied Mechanics I	5	–	105
Physics V (Sound and Heat)	5	4	119
Civil Eng. Draw. II	–	4	78
Engineering Lab. I	–	3	105
Surveying VII	–	4	78

SENIOR.

FALL TERM:

American History	5	–	97
Geology II	5	4	95
Applied Mech. II	5	–	105
Civil Eng. Draw. III	–	4	78
Graphic Statics	–	3	105
Engineering Lab. II	–	4	105

WINTER TERM:

Economics	5	–	85
Hydraulics I	5	–	107
Applied Mech. III	5	–	106
Civil Eng. Draw. IV	–	6	78
Civil Eng. Lab	–	8	78

SPRING TERM:

English Literature	5	–	88
Structural Eng. I	5	4	107
Railway and Highway Engineering	5	6	78
Thesis.			78

GRADUATE.

FALL TERM:

Modern Language I	5	–	96
Structural Engineering II (Iron and Steel)	5	8	107
Hydraulics II	5	6	107

WINTER TERM:

Modern Language II	5	–	96
Steam Engineering C	5	6	108
Municipal Engineering	5	6	78

SPRING TERM:

Modern Language III	5	–	96
Structural Engineering III (Concrete and Masonry)	5	8	107
Contracts and Spec.	3	–	107
Seminar	2	–	107

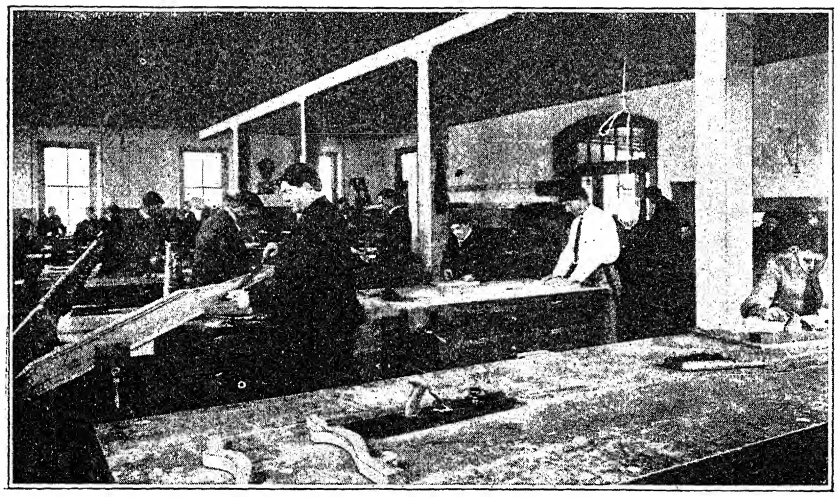
ARCHITECTURE COURSE.

This four-year course is designed to meet the rapidly growing needs of the building profession.

The freshman and sophomore years are identical with those of the mechanical and electrical engineering courses, and comprise, as will be seen in other parts of the catalogue, vigorous work in mathematics, drawing, surveying, physics, kinematics, and English, supplemented by practice in the carpenter shop, the machine-shop, the foundry, and the modeling room. The junior and senior years are given to advanced work in the lines named, supplemented by theoretical and practical work in perspective and rendering, building construction, modeling, specifications and estimates, architectural drawing, architectural composition, etc.

The graduate year is devoted to advanced work in architectural composition and other professional branches, including electric wiring, structural engineering, municipal engineering and civic improvement. It also makes provisions for the study of a modern language.

The College is well equipped to maintain a course in architecture. Its mechanical workshops are the most extensive west of the Missouri; its physical science laboratories are provided with an abundance of modern scientific apparatus; it owns a rapidly growing collection of several hundred plaster casts, tile and terra-cotta samples, marble specimens, etc.; it has a fine collection of models of the classic orders; a collection of blueprints of over fifty residences, schoolhouses and churches and nearly all the Kansas state buildings; a large number of modern books on architecture and engineering; a complete bound set of the *International* edition of the *American Architect;* a complete bound set of the *Inland Architect,* also of several European architectural magazines; a well-equipped blue-print room, etc. The substantial stone buildings of the institution, their complete system of water-supply, drainage, heating and lighting, and one of the largest and handsomest campuses of any institution in America furnish excellent illustrative material.



WOOD SHOPS.

Architecture Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Chemistry I	5	4	74
Descriptive Geometry	5	4	68
Algebra IV	5	–	102
Modeling I	–	4	69
Drill	–	4	111

WINTER TERM:

Chemistry I and II	5	4	75
Analytical Geometry	5	–	102
Public Speaking I	5	–	125
Perspective I	–	4	68
Architectural Draw. I.	–	4	69
Drill	–	4	111

SPRING TERM:

Chemistry II and III	5	4	75
Differential Calculus	5	–	102
Kinematics I	5	–	104
Modeling II	–	4	69
Architectural Draw. II.	–	4	69
Drill	–	4	111

JUNIOR.

FALL TERM:

Integral Calculus	5	–	103
Physics III	5	4	118
Residences	5	4	69
Architectural Draw. III,	–	6	69

WINTER TERM:

Rhetoric II	5	–	88
Physics IV	5	4	119
Public Buildings	5	4	69
Architectural Draw. IV,	–	6	69

SPRING TERM:

Civics	5	–	97
Applied Mechanics I	5	–	105
Physics V	5	4	119
Perspective II	–	4	69
Architectural Draw. V.	–	6	69

SENIOR.

FALL TERM:

American History	5	–	97
Heating and Plumbing	5	–	69
History of Architecture,	5	–	69
Graphic Statics	–	3	105
Rendering in W.-color	–	5	69
Architectural Comp. I	–	6	69

WINTER TERM:

Economics	5	–	85
Specifications, etc.	5	–	70
Trusses	5	4	70
Mural Decoration	–	4	69
Arch. Comp. II	–	6	70

SPRING TERM:

English Literature	5	–	88
Seminary	5	–	70
Landscape Arch	5	4	70
Arch. Comp. III	–	6	69
Thesis	–	4	70

GRADUATE.

FALL TERM:

Modern Language I	5	–	96
Building Laws	5	–	70
Civic Improvement	5	6	70
Arch. Comp. IV	–	8	69

WINTER TERM:

Modern Language II	5	–	96
Electrical Wiring and Lighting	5	4	92
Municipal Engineering	5	6	78
Arch. Comp. V	–	4	69

SPRING TERM:

Modern Language III	5	–	96
Landscape Gardening	5	–	98
Structural Eng'ng I	5	4	108
Arch. Comp. VI	–	10	69

PRINTING COURSE.

For some time it has been apparent that a broader education of the printing craft is needed. People are awakening to an appreciation of what is truly artistic and beautiful, and there is a growing demand for a higher class of printing. Notwithstanding this demand, the opportunity for the apprentice is less to-day than ever before.

The average printing-office does not provide a thorough training for the apprentice; nor does it give the young man an education such as a printer needs. Unless he be given a chance to supplement his composing-room instruction with art he will remain a mere mechanical tool. His instruction in the press-room should be supplemented with work in the machine-shops and the handling of gasoline-engines and electric motors.

The day when the "learning of the trade" was all that was necessary is passed. The successful printer of to-day must have a broader knowledge than is obtained through a routine of every-day work.

The all-around printer is becoming a thing of the past. Men who are capable of "running" a country newspaper are growing scarcer every day. The country newspaper man should be a compositor, a job-printer, a good "stone" man, a pressman—in fact, should be an all-around man—not so much to do the work himself as to know when it is properly done and to be able to intelligently and profitably direct those in his employ.

The four-year course recently adopted by the Board of Regents of the Kansas State Agricultural College is intended to give a broadening education with a practical knowledge of the trade. The College maintains and operates a well-equipped printing-office. The equipment consists of a Babcock Optimus, two Chandler & Price Gordons, perforator, stitcher, and other modern machines, all run by electric power; a large assortment of job faces, all in series and in cabinets, and enough body type to keep three stated publications going, besides the numerous pamphlets, bulletins, etc., constantly on hand.

Students in this course will receive instruction in the every-day work of the office, and this will be supplemented by classroom work in scientific, biologic and cultural studies, intended to broaden the intellect and sharpen the appetite for that higher knowledge which always brings its reward financially as well as intellectually. There will be no theoretical work—all practical.

It is not expected that at graduation a student will be an expert in any line, but he will have a broad foundation upon which to build, and will be far better able to cope with the problems of life than would be possible otherwise. The course leads to the degree of bachelor of science, and when the graduate goes out with a well-balanced education and a technical training such as he shall have received he will find little difficulty in reaching the height of his ambitions if he follows the motto of our state, "To the Stars Through Difficulties." Those wishing to specialize in any branch of the technical work of the course may take the graduate or fifth year, which includes German, and carries with it a special degree.

Printing Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Chemistry I	5	4	74
Spelling	5	–	123
Composition I	–	10	123
Distribution	–	4	123
Machine-shop I	–	4	104
Drill	–	4	111

WINTER TERM:

Chemistry I and II	5	4	75
Public Speaking I	5	–	125
Punctuation	5	–	123
Composition II	–	8	123
Drill	–	4	111

SPRING TERM:

Chemistry II and III	5	4	75
Reportorial Work I	5	–	123
Public Speaking II	5	–	125
Composition III	–	6	123
Correcting Proofs	–	2	123
Drill	–	4	111

JUNIOR.

FALL TERM:

Rhetoric II	5	–	88
Proof-reading I	2½	–	123
Reportorial Work II	5	–	123
Zoölogy I	5	4	93
Ad. Comp. and Dist	–	4	123

WINTER TERM:

English History	5	–	97
Editorial Writing	5	–	123
Proof-reading II	5	–	123
Editing Copy	–	4	123
Make-up and Imp	–	4	123
Job Lock-up	–	2	123
Job Composition	–	4	123

SPRING TERM:

Civics	5	–	97
Bacteriology I	2½	4	70
Motors	2½	4	108
Estimating Jobs	–	2	123
Job Presswork I	–	10	123
Cutting Stock	–	2	123

SENIOR.

FALL TERM:

English Literature I	5	–	88
American History	5	–	97
Job Presswork II	–	16	123
Trimming and Tabbing	–	2	123
Meth. and Management,	–	4	123
Paper, Rollers and Inks,	–	2	123

WINTER TERM:

Economics	5	–	85
English Literature II	5	–	89
Psychology	5	–	115
Cylinder Presswork I	–	16	123

SPRING TERM:

Philosophy	5	–	115
American Literature	5	–	89
Cylinder Presswork II	–	16	123
Thesis	5	–	124

GRADUATE.

FALL TERM:

Elective	5	–	59
Modern Language I	5	–	96
Tabular Composition	–	4	123
Practice Work	–	10	123
Ad. Writing	–	8	123

WINTER TERM:

Elective	5	–	59
Modern Language II	5	–	96
Color Composition	–	4	123
Practice Work	–	10	123
Adv. Editorial Work	–	8	123

SPRING TERM:

Elective	5	–	59
Modern Language III	5	–	96
Color Presswork	–	8	123
Practice Work	–	10	123

DOMESTIC SCIENCE AND ART COURSE.

The aim of the domestic science and art course is both specific and general. Technically it is an application of the science of bacteriology to the study of home sanitation and hygiene, of physiology and chemistry to the composition of foods and their effect, of physics as applied to heating and lighting. These sciences, necessarily, therefore, underlie the successful and intelligent conduct of the home, whether it be large or small, and must be included in any well-arranged course of domestic science. In the kitchen laboratory a standard system of measurement is taught, and constant emphasis is placed upon neatness, accuracy and economy in the handling of the material and utensils. The instruction in domestic art includes all the various kinds of hand sewing, the making of plain garments, and a complete system of dressmaking.

While the domestic science and art course emphasizes, primarily, the practical and material side of life, it does not stop here. To the end that well-rounded culture may be secured, studies are offered in this course in English, history, economics, psychology, and public speaking. The young women are constantly reminded that life is not all drudgery; that technical knowledge and scientific skill, even, fail to include the full meaning of education in its highest sense. They are taught that any training that fails to develop, harmoniously, body, mind and spirit is inadequate and incomplete. They are brought face to face with ideals as well as with actualities; and are made to see that, while skilful labor is the crowning dignity of life, grace, refinement and self-poise are the highest ingredients of true service.

As the truly useful woman must be both cultured and refined, one-third of the time of this course is given to history, art, literature, and economics, and about one-third to the sciences. The electives during the fourth year give opportunity to specialize in some chosen line.

The graduate year is recommended for all who desire to teach domestic science or domestic art. It is with difficulty that the domestic science training schools meet the demand for well-prepared teachers, a demand which is increasing more rapidly each year. While those who graduate from the four-years course will be able to teach successfully, there will be much left to learn both in the sciences and in their application to household affairs. The graduate year will make possible a much more technical training than is possible in the preceding years.

Domestic Science and Art Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:			
Chemistry I	5	4	74
Zoölogy I	5	4	93
German I	5	–	96
Color and Design II	–	4	69
Physical Tr. or Music	–	4	117
WINTER TERM:			
Chemistry I and II	5	4	75
Entomology I	5	4	94
German II	5	–	96
Home Decorations	–	4	69
Physical Tr. or Music	–	4	117
SPRING TERM:			
Chemistry II and III	5	4	75
German III	5	–	96
Physiology	5	2	128
Dressmaking	–	6	82
Physical Tr. or Music	–	4	117

JUNIOR.

FALL TERM:			
Human Nutrition	5	–	76
Public Speaking I	5	–	125
German IV	5	–	96
Bacteriology I	2½	4	70
WINTER TERM:			
Domestic Science I	5	10	83
Rhetoric II	5	–	88
Horticulture	5	4	98
SPRING TERM:			
Domestic Science II	5	8	83
Psychology	5	–	115
Bacteriology II Lab	–	6	71
English History	5	–	97

SENIOR.

FALL TERM:			
Civics	5	–	97
English Literature I	5	–	88
Dietetics	2½	6	84
Elective	5	–	59
WINTER TERM:			
English Literature II	5	–	89
Home Management	5	–	84
American History	5	–	97
Elective	5	–	59
SPRING TERM:			
Economics	5	–	85
Therapeutic Cookery	2½	4	84
Home Nursing	2½	–	84
Elective	5	–	59
Thesis.			

GRADUATE.

FALL TERM:			
Elective	5	8	59
Domestic Science III	5	–	85
Advanced Org. Chem	5	6	77
WINTER TERM:			
Elective	5	8	59
Domestic Science IV	5	–	85
Physiological Chem	5	6	77
SPRING TERM:			
Elective	5	8	59
Domestic Science V	5	–	85
Adv. Bacteriology	5	6	71

GENERAL SCIENCE COURSE.

This course is designed to meet the wants of those who seek to obtain a sound and liberal education through the study of the mathematical, physical and natural sciences, English language, and history. It is well adapted to the student who has not yet decided upon his life-work, or who wishes to make this a foundation for further study. It is based on the principle of "a general knowledge of all things before a special knowledge of a few." It will be well worth one's time to take this course before beginning the work of a technical or professional course. Laboratory and industrial work are a feature of this course, as of all others. The electives continuing through the junior and senior years give opportunity for special lines of study. The electives are to be taken in groups of three and the two years to be related as far as practicable.

The following groups of electives are suggested. Other groups may be arranged from studies in other courses:

- Analytical Geometry.
- Differential Calculus.
- Integral Calculus.

- Physics VI.
- Physics VII.
- Physics VIII.

- Inorganic Chemistry I.
- Inorganic Chemistry II.
- Organic Chemistry I.

- Plant Anatomy.
- Plant Physiology.
- Plant Pathology I.

- Human Nutrition.
- Domestic Science I.
- Domestic Science II.

- Advanced Dressmaking.
- Tailoring.
- Art Needle-work.

- Public Speaking II.
- English History.
- American Literature.

- History of Education.
- Philosophy of Education.
- Methods and Management.

- Entomology.
- Entomology.
- Entomology.

- German I.
- German II.
- German III.

- Music.
- Music.
- Music.

General Science Course.

First column of figures shows class hours per week.
Second column shows laboratory or industrial hours per week.
Third column shows page in this catalogue where full description may be found.

SOPHOMORE.

FALL TERM:

Chemistry I	5	4	74
German I	5	–	96
Zoölogy I	5	4	93
Projection	–	4	68
Drill or Physical Training or Music	–	4	111 113

WINTER TERM:

Chemistry I and II	5	4	75
German II	5	–	96
Entomology I	5	4	94
Perspective I	–	4	68
Drill or Physical Training or Music	–	4	111 113

SPRING TERM:

Chemistry II and III	5	4	75
German III	5	–	96
Bacteriology I	2½	4	70
Zoölogy II	2½	4	93
Drill or Physical Training or Music	–	4	111 113

JUNIOR.

FALL TERM:

Public Speaking I	5	–	125
Physiology	5	2	128
Elective	5	12	59

WINTER TERM:

English History	5	–	97
Geology	5	–	94
Elective	5	12	59

SPRING TERM:

Civics	5	–	97
Rhetoric II	5	–	88
Elective	5	12	59

SENIOR.

FALL TERM:

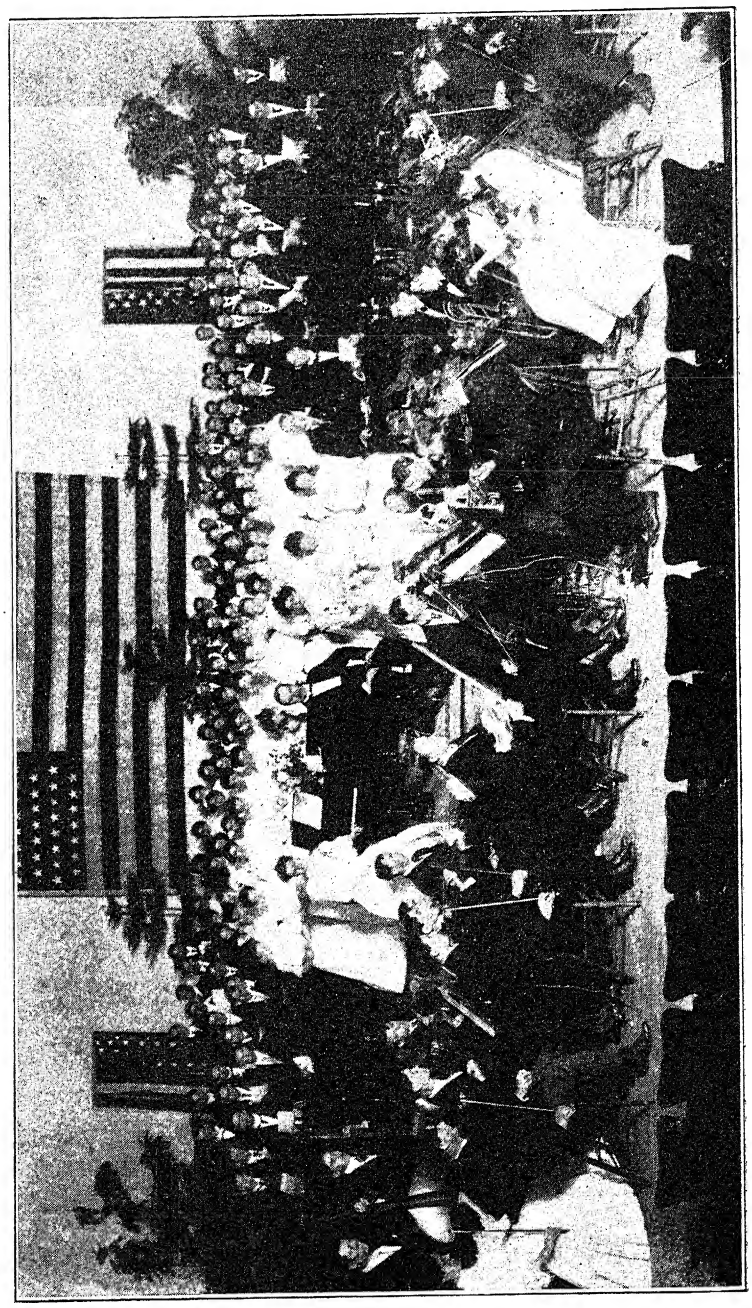
American History	5	–	97
English Literature I	5	–	88
Elective	5	12	59

WINTER TERM:

Psychology	5	–	115
English Literature II	5	–	89
Elective	5	12	59

SPRING TERM:

Economics	5	–	85
Philosophy	5	–	115
Elective	5	12	59



CHORAL UNION.

Outline of Instruction.

AGRONOMY.

Agronomy includes four general lines of study: Soils, crops, farm mechanics, and farm management.

The study of soils in the agronomy course is, in part, an application of the sciences of geology, physics, chemistry and bacteriology. It includes, also, practice methods in soil tillage and cultivation and deals mainly with the physical and fertility problems of the soil.

The word "crops" indicates the character of the study, and includes not only a study of the plants which comprise the great farm crops, but also their methods of breeding, culture, harvesting, marketing, uses, etc.

In the published course of study, farm mechanics is given under the head of "Farm Equipment." It is also taught as an elective (farm machinery) in the graduate year. This subject, like soils, includes the application of physical and mechanical principles and facts to farming operations, and deals largely with the machinery of the farm. It is especially important that the farmer know and understand the implements which are used in farming operations. Again, the principles of building construction as related to ventilation, lighting, and economy in building in the housing of stock and crops, are principles of physics and architecture which must be treated from the agriculture standpoint in order that this art and science be of the greatest value to the educated farmer in his work.

A knowledge of the sciences as related to agriculture and skill in producing large crops and fine herds are important factors, but proper management of the farm and the farming business is the essential feature which largely determines success. Farm management is the crowning study in agriculture. It is the practical application of all the facts, principles and sciences related to agriculture, and includes the conducting or management of the farm, not only as regards present success and profits, but also with reference to the future prosperity of the farmer and the permanent advancement of agriculture. The study of farm management is a study of the *farming business* in all its wide variations of class, character, and place.

It is proposed to make the studies in agronomy thoroughly practical. Agriculture is a business; it is not truly a science or art, but it depends upon science and art, and to understand the "principles of agriculture" requires a knowledge of many sciences. Physics, botany, chemistry, bacteriology, zoölogy and mathematics teach science and theory, and the studies in agriculture assist the student to make the application and put the theory and science into practice on the farm.

Agriculture. First year, spring term. Required of all male students. This is a study of elementary agriculture and serves, in part, as an introduction to the several courses in agriculture: Agronomy, horticulture,

animal husbandry, and dairying. It includes a study of the soil—its formation, texture, plant-food requirements, moisture, tillage, and fertility; the plant—its relation to the soil and climate, its propagation, growth and cultivation, and the kinds of crops and their culture; and the animal—its life, feeding, breeding, and management. Text-book, Brook's Principles of Agriculture, vols. I and II.

Farm Equipment. This is a study of the laws and principles which control the practices of agriculture, including the following subjects: Farm machinery: invention, history, and development; a study of the principles of construction and operation, with a comparison of the different makes or types of machines of different kinds and classes according to their adaptation for special conditions and uses; friction and lubricants; construction and ventilation of farm buildings; construction and maintenance of country roads; farm wells, special attention being given to geological conditions favoring good wells, also the construction and care of same; principles of draft as related to the horse, the load and the road, including methods of hitching, construction of eveners, etc.

The above indicates the character of the work, the attempt being to give the student an acquaintance with the laws of nature and principles of mechanics which apply to agriculture, that he may act with reason and work to advantage. Text-books, King's Physics of Agriculture, and Farm Machinery and Farm Motors, by Davidson and Chase.

Soil Physics I. Third year, winter term. Required of students in all courses in agriculture. A course designed to give the student an understanding of the effect of different methods of treating the soil upon moisture, texture, fertility, and production. It comprises a study of subjects as follows: The origin of soils and their formation; soil texture as influencing aeration, capillarity and diffusion; soil moisture and means of conservation; the washing of soils and means of prevention; the effects of spring and fall plowing upon the liberation of plant food, conservation of soil moisture and temperature of the soil; and the implements of tillage and their effects on the physical condition of the soil. Text-book, King's Physics of Agriculture.

Laboratory.—Will consist of the demonstration of the principles of soil physics taught in the classroom. The student will be given practice work in determining air and water movement in soils; the water-holding capacity and capillary power of different types of soil; effect of organic matter on the water-holding capacity; the determination of real and apparent specific gravity, pore space, and mechanical composition of soils, etc.

Soil Physics II. Fourth year, fall term. Required of students in agronomy. A brief study of the major soil-forming rocks and minerals and their influence upon the texture, physical properties and fertility of the soil. The various methods of determining the physical composition of the soil will be considered, as well as the influence of the different physical components of the soil upon the water-holding power, capillarity, and osmosis. Problems in the handling of special soils, such as gumbo, hard-pan, and alkali, will be considered. Text-book, Hilgard's Soils.

Laboratory.—This will be a continuation of the work begun in soil physics I, and will consist of a detailed study of special soils as shown by the mechanical analysis by means of the centrifugal and eleutriator methods. It will include field-work on the effects of rolling, harrowing, and disking, and the time and depth of cultivation with reference to the temperature and moisture of the soil. A study of the detection of acid and alkali in soils, and different methods of reclaiming such soils, will be made. As far as possible, opportunity will be given for original research work. Prerequisite, soil physics I.

Soil Fertility. Fourth year, spring term. Required of students in agronomy. A study of commercial fertilizers, barn-yard manure, green manuring and crop rotation upon the quality and yield of various crops; the effect of different crops and different systems of farming upon the depletion of soil fertility; proper methods of handling, preserving and applying barn-yard manure; as well as determining the needs of the soil for commercial fertilizers and the kind of fertilizers to apply, etc. Text-book and lectures.

Laboratory.—Work in the laboratory will supplement the recitation work in demonstrating what influence fertilizers and manures applied to the soil at different times and in different amounts may have upon the quality and growth of various crops, also, how the plant-food of the soil is affected by continuous cropping with the same crops and a series of crops. The work will include a study of the fertility of soils of different types and the influence of different ways and times of preparing the seed-bed upon the liberation of plant-food. Prerequisites, soil physics and agricultural chemistry.

Crops I. Third year, spring term. Required of students in all agriculture courses. This is a study of the principal cereal crops—corn, wheat, oats, barley, rye, rice, etc.—and includes a complete study of each crop as regards botanical characteristics, methods of breeding, methods of selecting seed, preparation of the soil, planting, cultivation, harvesting, storing, marketing, and uses. The general subjects of soil fertility, rotation of crops, use of manures and fetilizers, and the prevention and destruction of noxious weeds, insect pests and diseases also receive attention in connection with the study of the different crops. Many varieties of each of the standard crops are grown upon the College farm, so that the student may see them, or at least see samples of them, in the class-room, and thus become familiar with the variety types and characteristics. Text-book, Hunt's Cereals in America, with lectures and outside reading.

Laboratory.—The work in the laboratory consists largely of grain judging, the scoring of corn and the common cereal grains according to

METHOD OF STORING SEED CORN.

commercial standards and recognized standards of perfection for pure-bred varieties. A special study is made of corn and the selection of seed ears. It is surprising how few people can pick out a good ear of corn before they have been carefully instructed and trained in the vital points, both as to desirable qualities and defects. It is just as important to select and grow a pure and perfect type of corn, wheat, oats, or other crop, as it is to select and breed a well-formed hog or good type of dairy cow. A higher percentage of protein in the kernel, greater productiveness, greater hardiness, and other valuable qualities which may be bred into corn and other grains by carefully and intelligently selecting the seed may greatly increase the value of these crops to the farmer. Some laboratory study is also made of the plant, especially the fruit of the plant, as the spike, ear, and kernel, in order to compare the characters and become acquainted with the different types and varieties of the several groups of cereals. Text-book, Agronomy Department Grain Judging Guide.

Crops II. Fourth year, winter term. Required of all students in agronomy and graduate students in the animal husbandry and dairy courses. This is a study of forage crops and crops used for special purposes, as hay, pasture, silage, soiling, green manure, cover crops, etc. The study will include not only methods of culture of grasses, clover, alfalfa, and annual forage crops, but also methods of making and preserving hay, other dry forage, and silage. The care and management of the pasture will be given special attention. Plans for rotation of soiling crops adapted to different sections of the state will also receive special attention. Practical note will be made upon the adaptation of grasses and other crops for growing under different climatic and soil conditions, etc. Text-book, Shaw's books on Grasses, Clovers, and Forage Crops, with lectures and outside reading.

Laboratory.—The laboratory work will consist, in part, of a careful examination of specimens of the standard varieties of grasses, clovers and other forage plants, in order that the student may become familiar with the botanical characteristics of the plants which constitute the several crops. A study will also be made of grass, clover and alfalfa seeds with reference to quality, purity and freedom from adulterants and weed seeds. The student will become familiar with all of the common adulterants and learn to identify the seed of noxious weeds which may be found in grass, clover or alfalfa seeds. This is a very important part in the study of crops, and should become a part of the education of every one who may engage in general farming or who may become interested in the breeding, sale or distribution of seeds. Text-book, Agronomy Department Seed Grading Guide.

Farm Management. Fourth year, winter term. Required of students in all the courses in agriculture. This is a brief study of the economics of agriculture: The relation of capital and labor to the farming business; rental versus ownership of lands; choosing a farm; systems of farming; farming compared with other lines of business; advertising; keeping farm accounts and farm records; the above relating to the business end of farming. Under farm management also are properly included the management of the farm as related to laying out the fields; planning general, permanent systems of crop rotation; the management of the soil, particularly as related to maintaining soil fertility and insuring the permanency of agriculture; general methods of handling manures and fertilizers; "crop practices," especially as related to saving and marketing produce, with general suggestions regarding the breeding of crops; introducing new crops, etc.

The general equipment of the farm and its management as related to different lines of farming are properly summed up in the study of farm

management. As already stated, this is the *crowning study in agriculture;* the gathering together and the application to actual farming practices of all that has been taught and learned in the preceding studies in this course. Text-books, Card's Farm Management, Taylor's Farm Economics, and Farm Management (by Prof. A. M. Ten Eyck).

Laboratory.—Each student will be required to formulate general plans for carrying on some farm which he shall choose, and shall prepare a complete set of farm account-books, covering the business operations on such farm for one year.

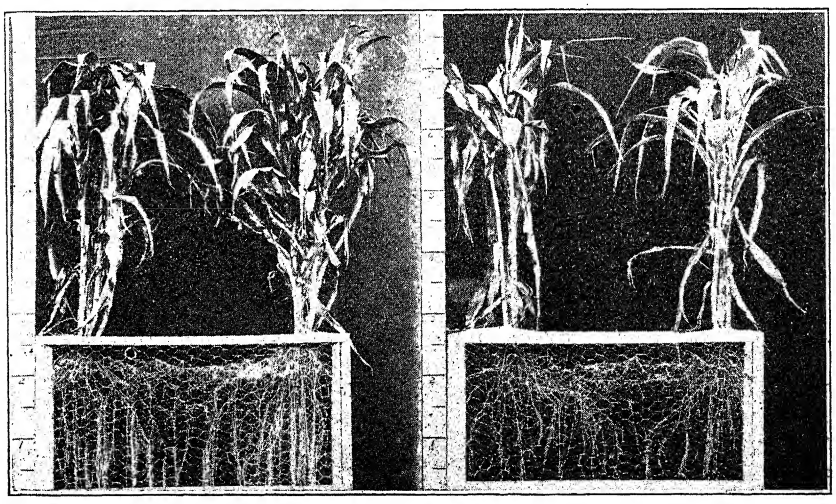
ELECTIVES.

Crops III. Graduate year, winter term. One hour recitation and eight hours laboratory work. Advanced work in grain judging, which shall include not only practice work in judging and grading grain, but also general reading and investigation of the work of others. Thus the study will consist largely of practice and research work.

Crops IV. Graduate year, fall term. One hour recitation and eight hours laboratory work per week. A study of crop-improvement methods. The student will carefully investigate methods of breeding corn, wheat, and other crops. The work will be largely research work, in reading bulletins and publications on the subject. However, the student will be expected to carry out in the field or laboratory some practical breeding work.

Crops V. Graduate year, spring term. One hour recitation and eight hours laboratory per week. Advanced work in grading, storing and marketing hays and grains. This is, in part, a continuation of crops III. The student will receive expert instruction in the commercial grading of all kinds of hays and grains, its shrinkage or loss in storing, and the fluctuations of market prices with conditions affecting the same.

If the student prefers he may take special advanced work in forage-crops investigation along any particular line in which he may be interested, which work will be largely outside reading and original investigation.



CORN ROOTS.

Field Work in Soils. Graduate year, spring term. Two and a half hours recitation and five hours laboratory per week. This subject is pursued in lectures and recitations on the types of soils of the United States, methods of classification, and adaptability of different crops to soil classes.

Research Work in Soils. Fifth year, winter term. Ten hours laboratory per week. The student taking this course will carry out a definite line of original research work in soil physics and soil fertility along special lines of interest to the student. Prerequisites, soil physics II and soil fertility.

Irrigation and Drainage. Graduate year, fall term. Two and a half hours recitation and five hours laboratory per week. This study consists of lectures and recitations on the methods of irrigation and the construction of irrigation plants and ditches, duty of water, fertilizing value of water, and methods of handling different types of soil under irrigation. A study is made, also, of the condition of land which needs artificial drainage, cost and methods of constructing drainage systems, and the value of drainage in connection with irrigation systems.

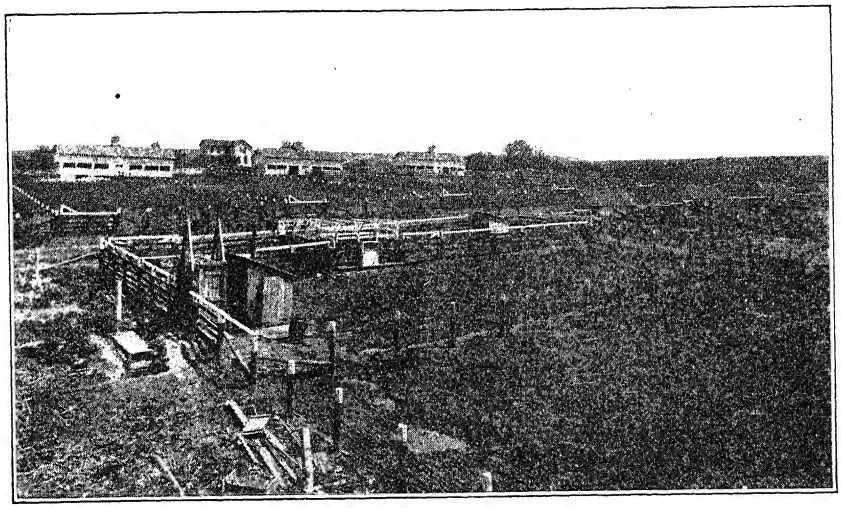
Laboratory.—The recitations will be supplemented by practical problems in the cost and manner of constructing irrigation plants and drainage systems.

Agricultural History and Experimentation. Graduate year, winter term. Two and a half hours recitation and five hours laboratory per week. The first subject will be given through lectures, assigned readings, and recitations on the history and development of agriculture, with a study of the evolution of agricultural methods of different countries and their influence upon the agricultural problems of to-day. The development of the agricultural experiment stations of the United States and methods of station work will be presented to the students largely through assigned readings. Seminars will be devoted to the study of experiment station literature.

Farm Machinery. Graduate year, fall term. One hour recitation and eight hours laboratory work per week. This course will consist largely of laboratory work, and will include the taking down and setting up of the different types of field machinery; testing on the road and in the field the draft of wagons, plows and other farm machines. This study includes the practical application of the mechanical theories and principles taught in the classroom, which broadens the conception of these truths and makes them easier to grasp and retain, and more useful to the student. By studying the construction of machines the abstract mathematical laws are better understood and their significance becomes more evident. A student taking this course may become an expert in setting up and operating farm machinery. Outside reading and topic work.

ANIMAL HUSBANDRY.

Successful agriculture depends very largely on the quality and class of live stock kept on the farm. As the price of farm lands increases, the value of farm crops is also increased, and it becomes necessary to produce a better class of animals to consume many of the farm crops and convert them into marketable products. Realizing this, the work of this department has been planned to emphasize this fact and to encourage young men in the breeding and improvement of the various classes of domestic animals. The work has been planned with a view of giving a thorough training along the lines of stock judging and selection, stock-breeding, feeding, general care and management. The College herds have been carefully selected, and among them are found representatives of all the leading breeds of cattle, horses, sheep and swine.



FEED LOTS.

1. **Live Stock I** is a study of all the market types and classes of horses, cattle, sheep and swine, together with score-card practice and judging.

2. **Live Stock II** is a study of the characteristics and origin of the various breeds of horses, cattle, sheep and swine, together with judging of such classes. This study must be preceded by anatomy I.

3. **Stock Feeding.** The practical feeding of the various classes of domestic animals for most profitable results is given in this course. The student is shown how to apply his knowledge of feeding standards and tables of digestible nutrients in feeding-stuffs to actual feed-lot conditions; the most economical combinations of feeds for maintenance, the production of milk, and the growing and fattening of the various classes of animals for market. Special attention is given to conditions prevailing over our own state. The results of experimental feeding by the experiment stations of this and surrounding states are freely drawn upon in this subject, and it must be preceded by animal nutrition.

4. **Pedigrees** is the tracing and writing of pedigrees of all breeds of stock, together with the study of the rules and requirements of registration for the various record associations.

5. **Live-stock Management** is a study of the best methods of managing live-stock farms, the housing and care of all classes of stock, with practical problems to be worked out along the lines of buildings and arrangements of feed-lots and such other conveniences as may be found needful and helpful in the successful management of a live-stock farm.

6. **Animal Breeding.** A study of the laws of heredity, variation, atavism, selection, etc.; methods and results of crossing, inbreeding, line-breeding, etc. The methods employed by the leading improvers of live stock are studied in connection with the application of these various laws, and the student is shown how to maintain and improve his own flocks and herds by a knowledge of the fundamental principles of breeding. Animal breeding must be preceded by embryology.

ARCHITECTURE AND DRAWING.

Drawing is the language of form and the key to every artistic and nearly every industrial pursuit. The educational and practical value of a systematic course in its various branches can hardly be overestimated. The general aim of the several courses in industrial art are the same: (*a*) The cultivation of observation and analysis of form; (*b*) the development of correct taste; (*c*) the teaching of the different methods of graphic representation; (*d*) the acquirement of skill in handling drawing tools.

Of the studies described below, Nos. 1 to 3, inclusive, are required in all courses; No. 5, in the general science course; No. 4, in the engineering courses; Nos. 10 and 11, in domestic science; and all Nos. except 10 and 11 in the architecture course.

The College furnishes drawing-board, T-square, triangles and water-colors for the graphic work done at the College; but all tools for home use, including drawing-board, T-square, triangles, compasses, shading pen, and protractor, must be furnished by the student.

1. **Free-hand Drawing.** First year, fall term. Exercises with forms involving the right line and the arc, illustrating the effects of geometrical arrangement, repetition, alternation, symmetry, proportion, harmony, and contrast. Study and drawing of conventional surface ornaments. Text-books, Walters's Industrial Drawing, envelopes 6 and 7.

2. **Object Drawing.** First year, winter term. Discussion and drawing of geometrical models and simple objects. Exercises in shading from the object and from imagination.

3. **Geometrical Drawing.** First year, spring term. Construction of perpendiculars, parallels, angles, polygons, tangents, etc. Construction of the ovoid, oval, conic section lines, spiral, and helix. Drawing, in India ink and water-colors, of various geometrical designs and architectural forms. Lettering. Use of drawing-board and T-square. Text-book, Walters's Industrial Drawing, envelopes 11 and 12.

4. **Descriptive Geometry.** Second year, fall term. Principles of orthographic projection; the profile plane; the secant plane; rotation in space; change of ground line. Development of surfaces. Interpenetrations of geometric solids. Projection of conic sections. Construction of screw forms. Shades and shadows of simple geometric forms. Problems in monodiametric and isometric projection. Discussion and solution of the usual problems relating to the point, right line, and plane. Generation and classification of lines and surfaces. Discussion and construction of tangents, normals, and asymptotes to lines and surfaces. General characteristics of warped surfaces. Graphic analysis of the hyberbolic paraboloid, the conoid, the hyberboloid of revolutions, the cylindroid, the helicoid, etc. Prerequisite, geometry, geometrical drawing, and trigonometry.

5. **Linear Perspective I.** Second year, winter term. Linear perspective is taught as central projection. It comprises the subjects of vanishing points, vanishing traces, measuring points, cylindric perspective and perspectic corrections. The models used in the work in sketching are objects whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations and principles involved in the apparent form of the object, to note the distribution of light, shadow and reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish. Each student is required to make a number of original crayon and ink sketches during the term.

6. **Linear Perspective II.** Shades and shadows in perspective; perspectives of buildings and ornamental details; rendering in ink; studio methods.

7. **Rendering in Water-color.** Representation, in ink and water-color washes, of building elevations and their landscape environments.

8. **Modeling I and II.** Modeling in clay and plaster of architectural details, historic ornaments and decorative statuary. Methods of making plaster casts.

9 and 10. **Color and Design.** Two terms. Discussion of the nature and influence of color, its use and abuse, and the principles that underlie good design and consistent, harmonious color combinations. Original designs in construction and decoration as applied to fabrics, dress and articles of common use in the home, that young women may recognize and appreciate that which is beautiful and appropriate, and may become more discriminating as purchasers.

11. **Home Decoration.** A study of design in its application to the home, its plan, furniture, and decorations. Emphasis is laid upon the refining and educating influence of well-chosen and appropriate decoration, the importance of simplicity being urged. Lectures on fine arts and the handicrafts, teaching that the home should show that fine art and industrial art are not to be considered separately.

Problems in planning and decorating houses.

12. **Architectural Drawing.** Six terms. Lettering and inscriptions. Study and drawing to scale of standard forms from the different historic styles; analytical study of the Five Orders; drawing of ornamental trusses, tracery windows, wrought-iron grilles, metal cornices, etc.

13. **History of Architecture.** Architectural history is taught by lectures and recitations, fully illustrated by means of the stereopticon, books, photographs and plaster models. The development of the leading historic styles, from the ancient Egyptian through the Greek, Roman, Byzantine, Romanesque, Moorish, Gothic, Renaissance, neo-Greek and Colonial to the modern Romanesque, etc., is treated topically. The aim is to give the student the ability to recognize, use and associate ornamental and structural forms properly.

14. **Residences.** Lectures on location, arrangement, construction, decoration and sanitation of residences; study of modern residence styles; drawing to scale of plans, elevations, sections and details of characteristic residences, involving construction in lumber, brick, stone and concrete.

15. **Public Buildings.** Lectures on planning, construction and decoration of churches, business houses, school buildings, etc. Drawing to scale of characteristic stone and brick buildings in Romanesque and Renaissance.

16. **Architectural Composition.** Six terms. Original work in planning, drawing, lettering, tracing and blue-printing of residences, schoolhouses, churches, town libraries, club-houses, etc. The subjects and their size, cost limit, style, and the character of the building material, are given by the instructor.

17. **Mural Decoration.** Each student is required to make a series of large water-color studies of interior wall-decoration schemes, including original designs for borders, centerpieces, etc.

18. **Heating and Plumbing.** Discussion of the phenomena and laws of heat generation and propagation. Systems of heating by means of air, water, and steam. Modern methods of ventilation. Dry closets; water supply; plumbing; sewer construction; sewage disposition.

19. **Trusses.** Study of modern methods of iron and steel construction applied to columns, beams, trusses and reenforcements. Prerequisite, graphic statics. Text-books, Kidder's Handbook for Architects and Builders; also, Nos. 97-A and 657-B of the International Text-book Company.

20. **Specifications.** Discussion and preparation of standard specifications for some of the residences and public buildings planned by the student in the classes in composition. Estimates of the materials and labor required in erecting and completing these buildings. Methods of making lump estimates. Discussion of the principles and form of building contracts.

21. **Landscape Architecture.** Discussion and study of the principles of landscape design, location and construction of roads and walks, the disposition of water as a landscape feature, etc. Each student is required to draw and finish in water-color a set of large plates representing his original designs for a home lot, a public square, a campus and a small park.

22. **Seminary.** Critical study of public buildings, such as the Manhattan library, the Riley county court-house, the buildings of the College, etc. Study and discussion of the work of American architects, such as Smithmeyer, Upjohn, and Richardson. Critical study of the buildings of the Carnegie Polytechnic in Pittsburg, Leland Stanford University, etc. Critical study of the competitive designs for St. John's Cathedral in New York and the State University of California.

23. **Civic Improvement.** This study is an extension of the seminary work of the senior year and comprises investigation of government methods of planning and erecting public buildings and municipal methods of planning and constructing public parks and boulevards. The subject is presented by illustrated lectures, supplemented by reading, and study trips to Fort Riley, Topeka, Kansas City, etc.

24. **Building Law.** Study of the legal relations of the architect, the owner and the contractor. Discussion of state laws concerning the erection of public buildings; labor laws; lien laws; city ordinances; building permits; building insurance; contracts and bonds.

25. **Thesis.** In the winter and spring of the senior year the student will prepare a thesis, consisting of a set of original drawings, details and specifications for a public building. This work will be done in the drafting-room of the department and under the supervision of the professor of architecture, who will decide on the cost limit and style of the building and the size and number of plates required.

Students taking the course in architecture are required to devote their summer vacations to practical work in actual building operations.

BACTERIOLOGY.

The subject of bacteriology is presented to the student as a biological science and as a practical factor in every-day life.

The instruction in this department is as follows:

Bacteriology I. Fall or spring term. Required of all students in the third year of the agronomy, animal husbandry, dairy, domestic science, horticulture, poultry, printing and veterinary courses, and all students in the second year of the general science course. A general introductory course, covering the morphological and biological characters, general technique and fundamental principles of applied bacteriology.

Bacteriology II. Winter term. Required of all students in the third year of the animal husbandry and veterinary courses. A study of pathogenic bacteria, especially those related to diseases of animals. Special methods necessary for the diagnosis of such diseases as tuberculosis, anthrax and glanders are considered. Sterilization, disinfection, dissemination of pathogenic bacteria, immunity, serum therapy and other subjects receive careful attention. Must be preceded by bacteriology I.

Bacteriology III. Winter term. Required of all students in the third year of the dairy and poultry courses. Consideration of the bacterial flora of milk, butter, and cheese, infectious diseases conveyed through milk, bacterial contamination of milk from air, water, utensils, etc., abnormal milk bacteria, fermentations in milk, starters, pasteurization, and sterilization. Must be preceded by bacteriology I.

Bacteriology IV. Spring term. Required of all students in the third year of the domestic science course. A general study of bacteria, both harmful and beneficial, in their relation to household economy. The important pathogenic bacteria relative to diseases of man; the transmission of disease through water, milk, and food; quarantine, disinfection, thermal death point of bacteria, fermentation, and food preservation. Must be preceded by bacteriology I.

Bacteriology V. Spring term. Required of all students in the graduate year of the domestic science course. A continuation of bacteriology IV, with special reference to problems in disinfection, sanitation, hygiene, decomposition, fermentation, and food and drink preservation. Must be preceded by bacteriology I and bacteriology IV.

ELECTIVES.

Bacteriology II, III or IV is open to students of the general science course as elective work. Must be preceded by bacteriology I.

Bacteriology VI. (Dairy.) Laboratory course and reading. Open to graduate students only. Must be preceded by bacteriology I and III. Time to be arranged with the instructor.

Bacteriology VII. (Soil.) Laboratory course and reading. Open to graduate students only. Must be preceded by bacteriology I. Time to be arranged with the instructor.

BACTERIOLOGICAL SEMINARY.

Required of all graduate students taking bacteriology, and open to under-graduates who are interested in research. Discussions of current bacteriological literature and problems under investigation form the basis for the seminary work. One hour every other week, throughout the year.

BOTANY.

The instruction in the botanical department is along three lines:

First, as a Pure Science.—The department aims to give the student training in observation and scientific reasoning, and also the information which he should have as a matter of general knowledge, regardless of his subsequent vocation. Botany is the first natural science to which the student is introduced, and for this reason it is necessary that he receive in this department his elementary training in scientific methods.

Second, as a Science Underlying Agriculture.—It is well recognized that botany is one of the most important of the sciences upon which the practice of agriculture is based, for the reason that botany deals with plant life, and plant life is at the basis of agriculture. Whenever practicable, illustrations and examples in both the elementary and advanced work are chosen with particular reference to their bearing on agriculture.

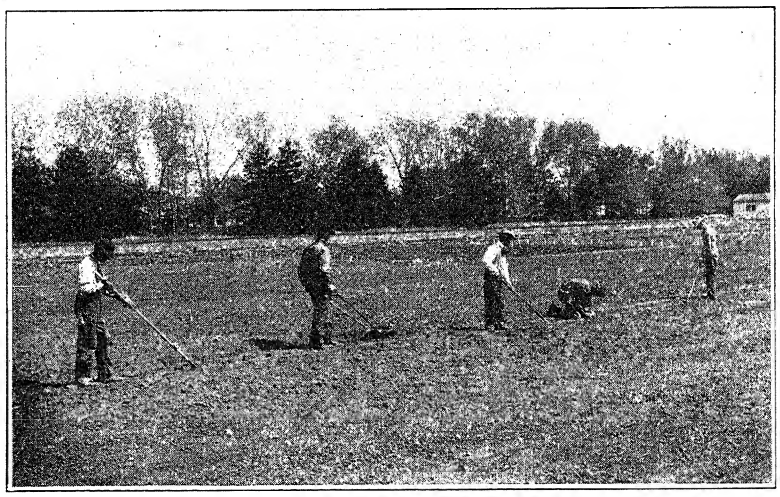
Third, Technical Botany, including such subjects as are of direct application in agriculture. The training in the special botanical studies of the agriculture and horticulture courses is chiefly of this nature, as will be seen by consulting the outline below.

For the elementary training offered in this subject, see botany I and II as outlined for the preparatory department.

Plant Anatomy. Third year, fall term. This course is designed to give the students in horticulture and agronomy some exact ideas as to just what sort of an organism a plant is; how it wrests its living from the inorganic world; and how it is equipped to make satisfactory terms with its environment. This course emphasizes the truth that it is not nature's way to evolve cells and tissues at random, but rather that they represent the means by which living organisms overcome and make use of the conditions and forces which surround them. It attempts to show how plants arrive at this achievement by the evolution of the different physiological tissue systems from a primitive, undifferentiated embryonic tissue, and how the tissue systems are adapted by their character and relation to each other to carry out the plant's vegetative functions. Text, Plant Anatomy, William Chase Stevens.

Laboratory.—Laboratory work occupies four hours per week throughout the term. It is the purpose of this work to familiarize the student with the plants and tissues studied in class, afford a good foundation for critical discussion and stimulate independent thought and reasoning, which is indeed a significant part of one's education. Detail drawings according to furnished outlines are required. Drawing materials are provided by the student. All necessary reagents, microscopes and other instruments are supplied by the department.

Plant Physiology. Third year, winter term, agricultural and horticultural courses. Since the proper nutrition and growth of the plants which comprise his crop is the chief aim of the agriculturist, the fundamental principles which underlie those plant functions are of cardinal importance to the farmer. In this course an attempt is made to give to the student a working knowledge of the functions and properties of living organisms, in connection with the agencies and forces which influence or imitate them, and an intelligent consideration of the general



METHODS OF PLANTING.

processes of plant life. To this end, readings, lectures and laboratory work will be given in such topics as the following: Nature and relations of an organism; relations and responses of plants to chemical and mechanical influences; the relation of plants to water, gravitation, light, temperature; the composition of the plant body; movement and exchange of fluids, respiration, fermentation, digestion, nutritive metabolism, growth and reproduction. Text, to be selected.

Laboratory.—Four hours per week throughout the term. The laboratory work in this course will consist of demonstrations by the instructor and physiological experiments upon living plants by the students themselves. The experiments will be so planned that each student may be able to work out for himself all of the main features in the physiological response of a plant to its environment, in plant nutrition, metabolism and growth. Use will be made of a complete outfit of physiological apparatus and a well-equipped laboratory. Careful notes, with drawings and descriptions of plants and apparatus, will be required of each student.

Plant Pathology I. Third year, spring term. The term is devoted to the study of causes of diseases in economic plants. The study is familiarized by lectures upon the great groups of the parasitic fungi and their chief subsidiary groups. The general morphology of these is discussed successively, and the morphology and physiology of the particular representatives of each selected for laboratory study is given in detail, together with combative and preventive measures. A rich herbarium of types and a constantly growing set of duplicates furnish abundant material for the work, and are supplemented by alcoholic specimens properly killed and fixed, and by prepared slides. Ample literature on the subject of plant diseases is afforded by the library of the department and of the Experiment Station. Prerequisites are courses 1 and 2, or their equivalents in the preparatory department.

Laboratory.—In the laboratory work pathological specimens are examined and the changes induced in plants by fungi and by abnormal physical conditions are studied in detail under the microscope. The object of this course is rather to study the workings of diseases from the standpoint of the host than to become acquainted with the groups of the parasitic fungi, although a sufficient study of the morphology of these for practical purposes is made in the laboratory.

Plant Breeding. Fourth year, spring term. This course is devoted to the study of the evolution and breeding of plants. The laws of heredity and variation are studied in detail, with especial reference to their application to the improvement of economic plants, and a critical study is made of the principles underlying seed and plant selection and hybridization. The history of the evolution and development of economic plants is taken up in considerable detail, and a critical examination is made of the methods followed and results obtained by investigators in plant-breeding here and abroad. The extended series of experiments now being conducted by the Experiment Station will be used for illustrative purposes. The course is given by lectures, supplemented by laboratory work, and a seminar in plant-breeding, held once a week.

Laboratory.—Laboratory work will involve experiments in seed and plant selection, hybridization, the statistical study of variation, etc.

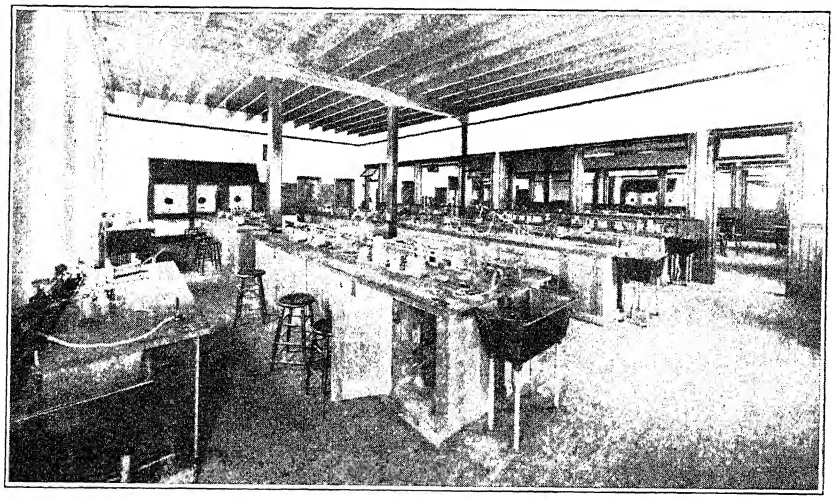
Plant Pathology II. Graduate year, winter term. This course, designed for the more advanced students in plant pathology, will lay particular emphasis upon the technique of pathological investigations and the taxanomic characters of parasitic fungi. It is the purpose of this course to prepare students for and stimulate them to independent and original work in the study of the diseases of plants. This course will be given by lectures, supplemented by required reading and laboratory and field-work. Lectures five hours per week, laboratory four hours per week.

CHEMISTRY.

All the industries are becoming more and more dependent for their highest success upon intelligent application of the sciences, and the special sciences are making their greatest progress by tracing their phenomena back to the physical and chemical changes that accompany them. A study of chemistry and physics is therefore essential to any understanding of the processes of nature or human industry. In the instruction in chemistry the aim is to insist upon a mastery of the chief concepts of the pure science through the agency of text-book drill, accompanied by demonstrations in the lecture-room, and experimental observations by the student himself in the laboratory. As the course proceeds, illustrations of chemical principles are drawn from the industrial processes of the chemical, agricultural, domestic and other arts, thus impressing the practical nature of the study. The ultimate object of the instruction is to develop in the student the power to form independent judgments upon the manifold problems of daily life in which chemistry plays a part.

Of the studies described below, Nos. 1, 2, and 3, with their accompanying laboratory work, are required in all courses. In addition, Nos. 4 and 8 are required in all agricultural courses and No. 7 in the domestic science and art course. The others are requirements in the graduate year of the several courses or are electives available for any course permitting them. Classes in elective courses requiring lectures and recitations will not be organized for less than three students.

1. **Chemistry I.** Sophomore year, fall term and first half of winter term. This work is designed to give the student a knowledge of the fundamental principles of elementary chemistry. As all subsequent progress in this science requires a working knowledge of its principal theoretical conceptions and of the rules for naming compounds, the significance of formulas, chemical equations, etc., much attention is given to these as well as to the practical uses of the substances and processes in metallurgy, engineering, agriculture and other arts. The text-book, Newell's Descriptive Chemistry, is supplemented by lectures when neces-



CHEMICAL LABORATORY.

sary, and the subject is amply illustrated by experimental demonstrations. Elementary physics is a prerequisite.

Laboratory.—As far as time permits, the student performs, independently, experiments touching the preparation and properties of the more important inorganic substances. Preference is given to those operations which illustrate important principles, and the student is required as far as possible to study experiments in that light. In this, as in all other laboratory work in chemistry, the objects are to illustrate chemical phenomena and to teach care in manipulation, attentive observation, logical deduction, and discrimination and accuracy in recording results and conclusions. The latter part of this course includes blowpipe analysis of the more important species of minerals, especially those of common occurrence and economic importance in agriculture and engineering. The student is not only required to give the designated amount of time, but at least a minimum amount of work must be satisfactorily performed in order to obtain credit.

2. **Chemistry II.** Sophomore year, second half of winter term and first half of spring term. A systematic study is made of the simpler examples of the more important classes of organic compounds in their logical chemical relations. Such substances as touch the every-day affairs of life are treated with greater detail. Opportunity is thus afforded to consider the hydrocarbons, alcohols, organic acids, fats, soap, sugars, starch, proteids, and other less known substances. Compounds used for clothing, food, fuel, light, antiseptics, disinfectants, anesthetics, poisons, medicines, solvents, etc., are included. While the useful organic compounds have special attention given them, the study of others is not excluded when they contribute to an understanding of the systematic relations existing among the several classes. Any serious study of the biological sciences, or of the arts connected with them, must require this as a foundation, and a knowledge of the properties of organic compounds finds frequent application in engineering as well. The subject is amply illustrated by experiments in the lecture-room. Text-book, Remsen's Organic Chemistry, in part, accompanied by lectures amplifying certain parts of the subject.

3. **Chemistry III.** Sophomore year, second half of spring term. In this and the accompanying laboratory work, which begins a term earlier, the prime object is to increase the student's knowledge of chemistry as a whole. The standard methods of analytical chemistry are made the basis of a systematic study of the chemical properties of the most important metals, non-metals, acids, bases, and salts. The teaching of analysis as such is a secondary object, although the student is held to the exact observations and careful reasoning required in ascertaining the composition of single substances and mixtures. The lessons, which are outlined in a special pamphlet, include a review of the more important topics of inorganic chemistry, in which natural occurrence of elements and compounds, industrial chemical processes and analytical reactions are seen to be closely connected. The pamphlet also includes simple treatment of some general chemical laws in accordance with modern views. The exercises are so arranged as to pass from the simple to the more difficult, and at the same time to facilitate the comparative study of the several cations and anions. The theories of chemistry receive constant application, and the effect of the course is to broaden, strengthen and unify the student's ideas of general chemistry, greatly to enlarge his knowledge of chemical facts, and at the same time to fix many of them by their association with the reactions made use of in analytical processes. Must be preceded by courses 1 and 2.

Laboratory.—Sophomore year, second half of winter term and all of spring term. The regular methods of qualitative analysis serve as a basis for a laboratory study of the chemical properties of substances. At first simple known salts are given the student; later, unknown sub-

stances, simple and complex, soluble and insoluble. Laboratory manual, Qualitative Analysis, by W. A. Noyes.

4. **Agricultural Chemistry I.** Junior year, fall term. This half-term's work is devoted chiefly to the study of the chemistry of soils. Among the subjects treated are: The soil-making rocks and minerals, and the agencies by which soils are formed from them and other materials; minerals used as fertilizers; injurious minerals; methods and limitations of soil analysis; soils of different regions compared; alkali soils and their reclamation; recognition of the chemical character of soils from their native vegetation. Text-book, Soils, by E. W. Hilgard. Prerequisite, chemistry III.

Laboratory I.—Junior year, fall term. This consists of simple quantitative exercises leading up to work upon substances of direct agricultural interest. These are so planned as to give as great a variety in training as is possible in the limited time available. Laboratory guide, Quantitative Analysis, by Lincoln and Walton.

Laboratory II.—Junior year, winter term. This is a continuation of quantitative analysis as applied to agricultural products, soils, fertilizers, etc.

5. **Agricultural Chemistry II.** Graduate year, or elective, spring term. In this course a thorough study is given to the chemical relations of plants to the atmosphere and the soil. The special requirements of different crops, and the composition and use of domestic and commercial fertilizers receive ample attention. The work is given by lectures, in part, but "Fertilizers," by E. B. Voorhees, is used as a text also. Prerequisite, agricultural chemistry I.

Laboratory.—Analysis of soils and fertilizers.

6. **Dairy Chemistry.** Graduate year or elective, fall term. The application of chemistry to the special problems of dairying is treated in as complete a manner as the time permits. Text-book, Dairy Chemistry, by H. D. Richmond. Prerequisite, chemistry II and III.

Laboratory.—Quantitative analysis of feeding-stuffs and dairy products.

7. **Human Nutrition.** Junior year, fall term. This is a course on the chemistry of foods and nutrition, and includes the following topics, with others: Composition of the animal body; composition of foods and methods of investigation employed in their study; the changes that the several classes of foods undergo in cooking and digestion, and the functions that they perform in nutrition; daily food requirements, and the balancing of dietaries; food economy. The Nutrition of Man, by R. H. Chittenden, is used as text-book, but is largely supplemented by a course of lectures. Course 2 and physiology must precede this course.

8. **Animal Nutrition.** Junior year, winter term. This course is designed to provide a sufficient scientific basis for the study of practical stock-feeding, and includes consideration of the following topics, with others: The chemical characteristics of the more important feeding-stuffs and causes of their variation in composition; the chemical changes that feed undergoes in digestion; the tissues that can be built up from the several proximate principles of feeds, and the bodily functions that they can sustain; the requirements of the animal body as modified by its age and condition and the purpose for which it is fed, and modes of calculating rations from feeds of known composition and digestibility. Lectures, and parts I and II of Henry's Feeds and Feeding. Course 2 must precede this.

9. **Principles of Animal Nutrition.** Graduate year, or elective, fall term. This course gives a thorough study of the relations of animals to matter and energy. The methods of research and the results obtained

are treated in an extended and scientific manner. Text-book, Principles of Nutrition, by H. P. Armsby. Prerequisite, chemistry II.

10 and 11. **Inorganic Chemistry I and II.** Graduate year, or elective, fall and winter terms. In these courses the student gives thorough study to the facts of chemistry and their interpretation in the light of modern theory. Text-book, General Inorganic Chemistry, by Alexander Smith.

Laboratory.—Quantitative exercises in theoretical and practical chemistry.

12. **Organic Chemistry.** Graduate year, or elective, spring term. As careful a study of the aliphatic compounds as the time permits. Text-book, Theoretical Organic Chemistry, by Julius Cohen.

Laboratory.—Organic preparations in the aliphatic series.

13. **Organic Chemistry II.** Graduate year, or elective, fall term. The aromatic compounds. Text same as for organic chemistry I.

Laboratory.—Organic preparations in the aromatic series.

14. **Physiological Chemistry.** Graduate year, or elective, winter term. A study of chemistry in its relations to body tissues, nutritive substances and the physiological processes. Text-book, A Text-book of Physiological Chemistry, by J. H. Long. Students expecting to take this subject are advised to elect inorganic chemistry I and II and organic chemistry I during the senior year, organic chemistry II then following naturally the fall term of the graduate year. Students lacking this preparation, to a greater or less extent, will pursue the subject at a disadvantage.

Laboratory.—A suitable course of laboratory exercises accompanies this study.

15. **Quantitative Analysis.** This may be taken at any time after completing course 3. After the necessary preliminary training, the student may give special attention to any line of quantitative analysis, such as that of foods and fodders, dairy products, soils and fertilizers, ores, water, gases, etc. The investigation of special chemical questions is encouraged.

16. **Journal Meeting.** Once a week, throughout the year, the officers of the department, with the more advanced students and such others as wish to, meet for papers and discussion upon topics representing the progress of chemical science, chiefly as found in the current journals. The preparation of subjects for presentation at these meetings is a part of the required work of graduate students and of those electing advanced courses.

CIVIL ENGINEERING.

In addition to the classroom work in this course, there is a large amount of practice in the field, drafting-rooms and laboratories, the object being thoroughly to fix in the student's mind the fundamental principles of civil engineering, and at the same time give him skill in their application. Many of the engineering subjects in this course are taken in the mechanical engineering department. The description of those subjects will be found under that head.

Of the following subjects, surveying 1 is required of all young men in the College. The balance are required of the civil engineers only.

1. **Surveying I.** First year, spring term. Field-work, with instruction and practice in the manipulation and adjustment of the chain, compass, level and transit, and their use in the solution of the simpler problems in surveying. Trigonometry must accompany or precede this course.

2. **Surveying II.** Second year, fall term. A topographical survey of a plot of ground by the method of rectangular coördinates. Preparation required, surveying 1.

3. **Surveying III.** Second year, winter term. A continuation of the preceding term's work. Topographical mapping. Preparation required, surveying II.

4. **Surveying IV.** Second year, spring term. City surveying. Topographical surveying by transit and stadia. Use of plane table. Mapping. Preparation required, surveying III.

5. **Surveying V.** Third year, fall term. Underground and hydrographic surveying. Railroad curves. Computation of earthwork. Preparation required, surveying IV. Text-book, Trautwine's Civil Engineer's Pocket Book.

6. **Geodesy.** Third year, winter term. Effect of the earth's curvature on surveying methods. Precise leveling. Triangulation. Preparation required, astronomy and surveying V.

7. **Surveying VI.** Third year, winter term. Field-work to accompany geodesy. Triangulation survey. Observations for azimuth, latitude, longitude, and time. Geodesy must accompany or precede this course.

8. **Civil Engineering Drawing I.** Third year, winter term. Perspective, stereotomy. Preparation required, descriptive geometry.

9. **Civil Engineering Drawing II.** Third year, spring term. Plotting and computations to accompany surveying VII. Surveying VII must accompany or precede this course.

10. **Surveying VII.** Third year, spring term. Reconnaissance, preliminary survey, and location of a short railroad line. Preparation required, surveying VI.

11. **Civil Engineering Drawing III.** Fourth year, fall term. A continuation of the preceding term's work.

12. **Civil Engineering Drawing IV.** Fourth year, winter term. Working-drawings of trusses laid out in graphic statics in preceding term. Preparation required, graphic statics.

13. **Railway and Highway Engineering.** Fourth year, spring term. Principles governing the location, construction and maintenance of roads and railroads. The drawing-room practice will consist of the design and proportioning of culverts and waterways and the layout of tracks, yards, etc. Preparation required, civil engineering drawing II, applied mechanics III, and hydraulics I.

14. **Municipal Engineering.** Graduate year, winter term. Problems of water supply, drainage, sewerage and general sanitation.

Thesis. Fourth year, spring term, and graduate year, winter and spring terms. Each student in the civil engineering course is required to present, before graduation, a thesis on some subject directly connected with the work of his profession. This thesis is to be a report on an original investigation conducted by the student.

An additional thesis is required of a student completing the graduate year. This may be a continuation of the one presented in the preceding year, and contain the data included in the former, or may be upon a new subject.

DAIRY HUSBANDRY.

The new courses that have recently been adopted offer exceptional opportunities for a well-grounded and complete course in dairy husbandry. These courses should thoroughly prepare and equip the student who intends to return to the farm, run a dairy, take up commercial dairying, fill state and government positions, or to engage in research and instruction work.

DAIRYING.

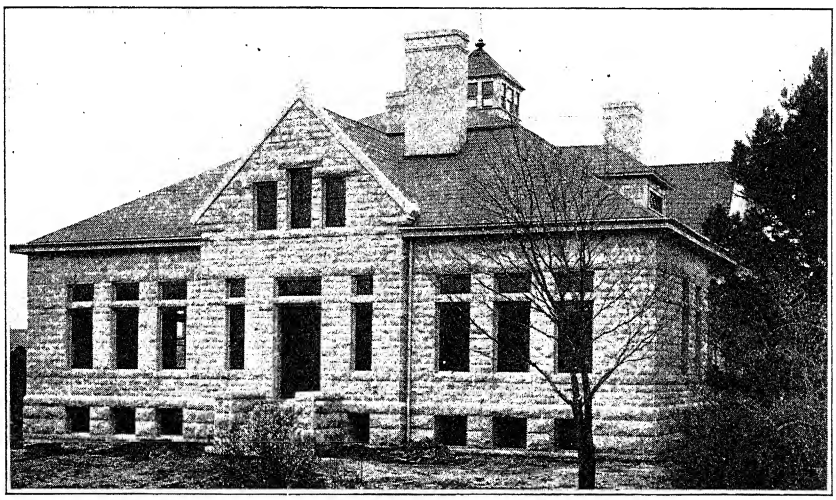
Dairy instruction, as given in the dairy department, can be classified under four heads:

First, Dairying.—As a general study given to veterinary students, and to all of the students taking agricultural courses, covering, as near as time will permit, the fundamental and most important branches of dairy husbandry. Special emphasis is placed upon the economical production of high-class dairy products. Special attention is also given to the composition of and testing of dairy products.

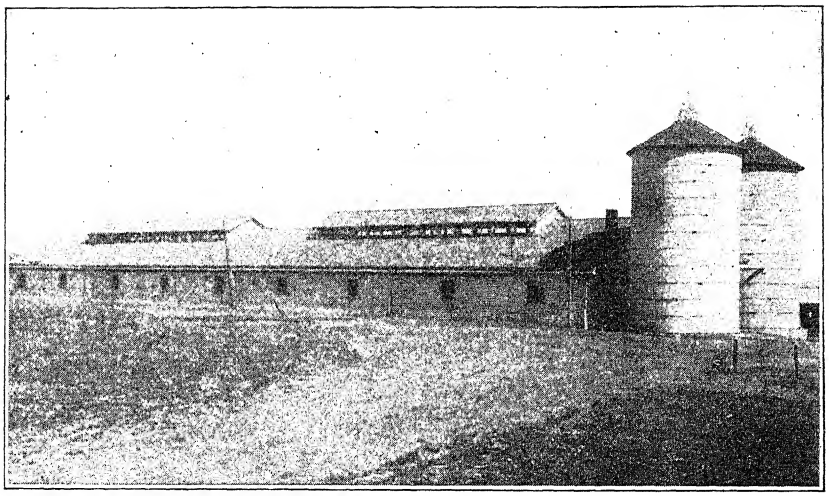
Second, Dairy Production.—This course is designed to meet the needs of the student who intends to make a specialty of dairy farming, considering the raising, feeding and care of improved dairy stock, the manufacture of dairy butter and cheese, the production of cream for wholesale, retail and creamery trade, and wholesale and retail milk, including the production of certified, sanitary, and modified milk.

Third, the Manufacture of Dairy Products.—This course comprises the details involved in the manufacture of butter, cheese and ice-cream, and the management of milk depots and receiving and skimming stations.

Fourth, Advanced Dairying.—This part of the course, taken up mostly in the last year, is intended to supplement the work which has preceded with a more thorough and advanced study of the entire dairy field, with special emphasis being placed upon that portion of the work which will tend to fit the student for special work, such as dairy and creamery inspector, government expert, experiment station investigator and instructor.



DAIRY HALL.



DAIRY BARNS AND SILOS.

1. **Dairying.** Second year, fall term. Breeding, feeding, keeping records and judging dairy cows. Nature and composition of dairy products. The production and handling of milk, cream and butter for home use, retail and commercial purposes.

Laboratory.—Practice in testing milk, cream, skim-milk, buttermilk, whey, butter and cheese for fat. Testing the leading dairy products for adulterations; making moisture determinations of butter; testing accuracy of glassware; operating and making a critical study of the leading makes of separators; practice in pasteurizing milk and cream; aerating and cooling milk and cream; ripening and churning cream; salting, working, printing, scoring, and preparing butter for market.

2. **Butter Making.** Fourth year, fall term. A careful study of the details of the manufacture of butter on the farm, in the dairy, and in the factory. Methods of separating, handling and ripening cream; preparation and use of starters in pasteurized and raw cream; the manufacture of sweet-cream butter; churning, washing, salting and packing butter; keeping complete records of each operation; making salt, curd, fat and moisture determinations of the finished product; judging and scoring the butter at frequent intervals, noting its keeping qualities, and the effects of different methods of manufacture upon its commercial value.

3. **Cheese Making.** Fourth year, winter term. Making cheese on the farm, for home use and for sale. The commercial manufacture of cheese, comprising every detail, from receipt of the milk to the marketing of the finished product.

Laboratory.—The making of cheese with farm equipment; the manufacture of cheese on a commercial scale; keeping complete records of each operation, and noting its influence upon the finished product; and practice is given in testing, judging and scoring cheese.

4. **Market Milk and Cream.** Fourth year, spring term. Feeding and general care and management of dairy herds. Keeping records of dairy cows; production and marketing of modified, certified and sanitary milk.

Laboratory.—Practice in aerating, cooling, pasteurizing, standardizing and bottling milk and cream for retail and wholesale trade.

5. **Dairy Management.** Fourth year, spring term.

Laboratory.—Construction of dairy barns, storage barns, silos, milk rooms, dairies, ice-houses, fences, shelters, and the planning and laying out of dairy plants for special purposes.

6. **Experimental Dairying.** Fifth year, fall term. A critical review of experimental work in dairying, collecting experimental data, and planning experiments.

Laboratory.—Performing practical experiments and keeping accurate records of results.

7. **Manufacture of Special Dairy Products.** Fifth year, winter term. Study of the manufacture of condensed milk, powdered milk, milk-sugar, evaporated milk, fancy creams and ices, soft cheese, cream cheese, canned cheese and butter.

Laboratory.—Laboratory practice in the manufacture of dairy products of special commercial value.

8. **Dairy Inspection.** Fifth year, spring term. The use of special score-cards for inspecting and scoring dairies, city milk supplies, milk depots, ice-cream plants, and creameries. Outlining state and city ordinances governing the handling and public sale of dairy products.

Laboratory.—A thorough practice in testing for adulterations in dairy products; centrifugal and microscopical examination of milk for filth, bacteria, and leucocytes.

9. **Dairy Seminary.** Fifth year, spring term. A study of the present and past history of dairying in the United States and foreign countries, tracing the development of the industry, its literature and facilities for education in each country.

Laboratory.—Reading course and critical study of books and papers relating to the dairy industry.

Thesis. A thesis is required at the end of the fourth year, and another thesis at the completion of the fifth or graduate year.

DOMESTIC ART DEPARTMENT.

The object of this course is to give the pupils practical knowledge of all varieties of hand sewing and machine sewing; also a thorough knowledge of the principles of dressmaking, with as much practice in their application as time will allow. It is not only valuable to those who wish to make their own dresses, but also affords an opportunity to those who wish to become practical dressmakers.

Under a system which is carefully planned and properly carried out, learning to sew may be as educational a process as any other of the industrial arts. It develops the thrifty disposition, encourages habits of neatness, cleanliness, order, management, and industry. Patching, darning and home-made garments are all ways and means of economizing.

Of the studies described below, all women are required to take Nos. 1, 2 and 3, and those in the domestic science course must take No. 4.

Materials for No. 1 are furnished by the College, the student furnishing her own thread, thimbles, needles, and tape measures. In Nos. 2, 3 and 4 the pupil furnishes her own materials and makes her own garments. Each pupil is required to keep a note-book, in which she records a description of the work accomplished. A written examination is held at the close of each term.

1. **Sewing I.** First year, fall term. The pupils make a book of models covering the full course of hand sewing, different kinds of stitches, combinations of stitches, seams, hems, tucks, gathering, overhanding,

DRESSMAKING.

darning, patching, and making buttonholes. Talk on implements used in hand sewing; proper position of body in sewing. Methods of using thread, needles, thimble, and tape measure.

2. **Sewing II.** First year, winter term. Discussion of appropriate materials and trimmings for undergarments. Care and use of sewing-machines. Machine practice. Drafting, cutting and making underskirt and drawers. Materials used: Muslin, long-cloth, cambric, or nainsook.

3. **Sewing III.** First year, spring term. Drafting, fitting and making dresses without lining. Materials: Madras, gingham, linen, or lawn.

4. **Dressmaking.** Second year, spring term. Nos. 1, 2 and 3 are prerequisites for this course. The work of this term is devoted to the fundamental principles of dressmaking. Each pupil will be required to take measures, draft, and make a woolen dress. Talks are given on textiles and on colors and their combinations.

5. **Advanced Dressmaking.** Senior or graduate year, fall term. The study of textiles and costumes. Designing, drafting and making an elaborate street, house or evening dress.

6. **Tailoring.** Senior or graduate year, winter term. Making jackets and coats. The work of this term includes instruction in tailor finish as applied to dresses, jackets and coats.

7. **Art Needlework.** Senior or graduate year, winter term. This course aims to give the students the necessary stitches in decorative art, and at the same time to cultivate artistic feeling and judgment in the choice of design and color; also, in the decoration of fancy dress waists, collars, undergarments, and household articles.

DOMESTIC SCIENCE.

The object of the course in domestic science is to fit young women as home-makers and as capable women in whatever sphere their life-work may be. Such, then, as tends to cultivate correct observation, accurate reasoning, generous judgment and an appreciation of the beautiful in nature and art may rightfully find a place in such a course.

That which most especially pertains to woman's province, the home, is dependent upon the sciences of chemistry, physiology, bacteriology, and hygiene, and direct applications of the principles of these sciences are made in the lessons in cookery, dietetics, home nursing, and household management.

Hygiene and elementary cooking are required of all young women; the remaining courses are required of domestic science students, and may be elected by general science students.

1. **Hygiene.** First year, fall term. This course consists of one lecture each week, and is to be taken by all young women in the first year of attendance. The lectures cover the subjects of baths, exercise, ventilation of study rooms, and other topics that directly bear upon the health of a young woman student.

2. **Elementary Cookery.** First year, winter term. The economic use of fuels; the proper management of stoves and ranges; the care of utensils; the cookery of vegetables, cereals, fruits, milk, eggs, and meat, are taught, together with a few lessons in bread-baking and cake and pastry-making.

3. **Domestic Science I.** Third year, winter term. This course begins with lectures on cooking utensils, ranges, cleaning agents and household waters. A thorough study of all carbohydrate foods, their sources, chemical composition, cookery, digestion and economic value is followed by a similar consideration of fats and proteids. The latter part of the term is devoted to a careful and full study of leavening agents and breads. Instruction is given in the purchase of foods, preparation of menus and in table setting and serving. Course I, physiology, bacteriology I, and human nutrition, are prerequisites. Text-books are Hutchison's Food and Dietetics and Miss Farmer's Boston Cooking School Cook Book.

Domestic Science Laboratory I. This accompanies domestic science I. The student each day makes various preparations of the foods considered in the lecture-room. Vegetables, vegetable soups, cereals and fruits are all prepared by many methods. Lessons in soap-making illustrate the digestion of fat. Lessons in frying in deep fat illustrate the effect of heat upon fat, and salad lessons the emulsion of fats. Eggs, milk, cheese and meats are prepared separately and in combination. Yeast is studied under the microscope, after which various methods of making liquid yeast are practiced. Bread is made by each individual student until each can make a high-grade loaf. Lessons in cakes, pastries and desserts are given, and class dinners are served.

4. **Domestic Science II.** Third year, spring term. This course is devoted to the study of the economical purchase of foods, the preparation of actual menus, the review of all work done in domestic science I, and to the figuring of actual meals furnished, their nutritive value, nutritive ratio, and exact cost per individual consumer. Prerequisite, domestic science I and domestic science laboratory I.

Domestic Science Laboratory II. This course is given in connection with domestic science II. The students prepare menus, purchase materials, and serve actual meals; also receive instruction in the preparation of many difficult and elaborate dishes. Each group of four young women go to housekeeping in a completely furnished small kitchen, and are held

responsible for its care and condition. The intention is to as closely as possible approximate home conditions.

5. **Dietetics.** Fourth year, fall term. Dietetics is advanced work along the same general lines as that given in courses 3 and 4. Special stress is laid upon food preservation, adulterations, and preservatives. Instruction is given in the balanced dietary, nutritive ratios, and the agreeable and hygienic combinations of foods. Prerequisites, domestic science I and II. Text-books, Thompson's Practical Dietetics and Conn's Yeasts and Moulds in the Household.

Laboratory.—Practice in canning, preserving and jelly-making is given first, after which the more elaborate dishes are prepared and course dinners are served. Excursions are made to the local mills and markets and to those of the near-by cities.

6. **Home Management.** Fourth year, winter term. Sanitary construction and care of the house; sanitary, economical and artistic household furnishings; judicious expenditures of incomes, and the keeping of household accounts are the topics treated. Lectures given and reference work required.

7. **Therapeutic Cookery.** Fourth year, spring term. Abnormal conditions of digestion, assimilation, and metabolism; alterations of secretions and destruction of tissue due to germ diseases are studied, together with the diets adapted to the conditions and needs of the system. Special attention is given to the feeding of infants and small children.

Laboratory.—The practice work consists of the preparation of many and easily digested foods suitable for the sick and the arrangement of trays for invalids. Some demonstration lectures are given by the class. Text-book, Thompson's Practical Dietetics.

8. **Home Nursing.** Fourth year, spring term. The course covers the furnishing and care of sick-room, the giving of baths, administration of medicines, record of symptoms, first aid to the injured, and the intelligent use of antiseptics and disinfectants. Bacteriology is a prerequisite. Week-Shaw Text-book of Nursing.

COOKING.

ADVANCED COURSES.

9. **Domestic Science III.** Theory of the presentation of domestic science. Fall term. This is a study of laboratories, laboratory equipment, cost of equipment, and cost of supplies. Outlines of lessons are prepared and demonstrations are required of each member of the class. Courses 5, 6 and 7 are prerequisites.

10. **Domestic Science IV.** Food study. Winter term. Advanced study of the digestion, absorption and metabolism of foods. Schafer's Physiology, vol. 1, is the text-book. Weekly reviews of scientific articles bearing upon domestic science subjects are required. This course is open to graduate and elective students.

11. **Domestic Science V.** Bread-making. Spring term. Both class work and laboratory are required. Yeasts are studied under the microscope. The milling of wheat is carefully considered and the mills are visited. All the conditions that may affect the quality of bread are investigated. Bread is prepared by many methods and comparisons made. This course is open to elective and graduate students.

12. **Dietary Studies.** Spring term. The students entering this course are put upon fixed diets. The amounts consumed, amounts wasted, cost and effect upon the subjects are recorded. The nutritive ratio and caloric value of the foods used are computed. The meals are prepared by the students in the course, which gives much valuable practice in the preparation and service. This course is for elective and graduate students.

13. **Theoretical Domestic Science.** Can be arranged for graduate students, and consists of outlines and reviews of many standard works relating to domestic science subjects, together with individual investigations along various domestic science lines.

ECONOMICS.

The technical training which the state provides for young men and women is intended to be of social rather than individual advantage. It is assumed that the student who has been trained at the expense of the state will increase the productive capacity of the community in which he employs his skill, and thus advantage society as well as himself.

His whole obligation to society, however, is not discharged in this way. He owes something to the state as a citizen. As such he cannot escape the responsibility of contributing his share towards the solution of economic problems which grow out of the complex industrial system of which he is a part. To this end he should be familiar, at least, with the fundamental principles which underlie the production, exchange and distribution of wealth, and which enter so largely into the numerous economic problems that await popular solution.

It is the aim of this department, therefore, to emphasize the application of economic principles to industrial conditions. In doing this care is taken to avoid a dogmatic presentation of any subject. Students are encouraged to form habits of investigation and correct thinking before arriving at conclusions. The instruction given is by a combination of the text-book and lecture methods, which offers a means of escape from the narrowness and dogmatism that result from exclusive reliance on a text-book, and from the waste of time in imparting information by lectures only, when such could be acquired more surely and quickly from the printed page. A department library of well-selected books bearing on economics, sociology and statistics is at the disposal of students, and is used for collateral readings, book reviews, and reports.

A term's work in this subject is required in the senior year of all courses, and should be preceded by both civics and American history, except in the animal husbandry and horticulture courses, where economics and American history are concurrent subjects. Text used, Gide's Economics.

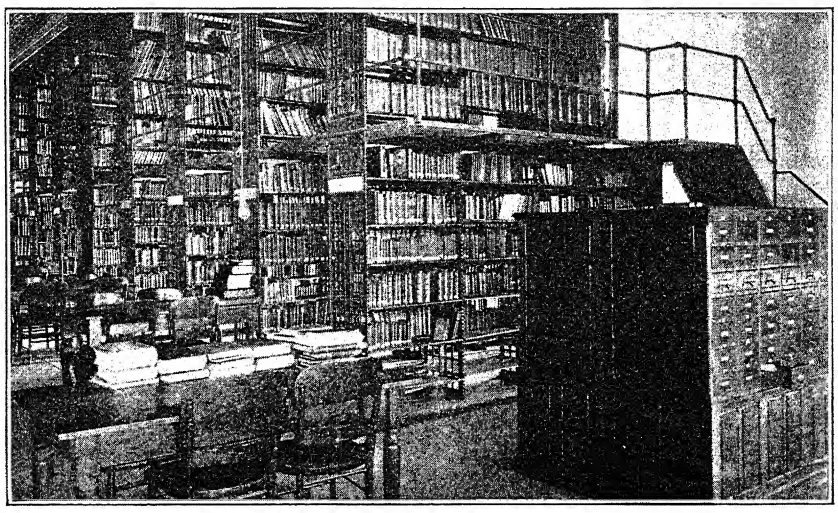
ENGLISH LANGUAGE AND LITERATURE.

As its name implies, the work of this department is twofold: On the one hand it deals with the derivation, nature, and especially the effective use of our mother tongue in practical discourse; on the other, it studies the literature of the English-speaking world, as exemplified by the master writers at different periods of our literary development. Thus, the attention of the department is devoted to the study of rhetoric and to the study of literature.

The aim of the instruction in rhetoric is to give as thorough and systematic training in the principles and practice of English composition as the time devoted to the subject will admit. The most common errors to which inexperienced writers are subject are pointed out and criticized. The elements of style are studied from a text-book, discussed in daily recitations, and applied practically in the writing of paragraphs, themes, and essays. Attention is given to methods of finding, selecting and arranging material and to the application of these methods in the various types of discourse.

In literature, the instruction seeks to give the student an understanding of the nature and characteristics of literature in its leading forms, to develop in him a taste for the best literature and enthusiasm for literary study, to impart to him right methods, to train him in the ability to judge with confidence the literary qualities of any given work, and, through sympathetic study of masterpieces, to give him some knowledge of the leading authors.

In most of the courses in literature the work is pursued by a combination of lectures, classroom study, and seminary investigation. The literature is read at first hand, and the student is required to do for himself,



CORNER OF BOOK ROOM.

by way of interpretation, as much as possible. The extensive and intensive methods are combined: wide reading, to obtain literary atmosphere and breadth of view; critical study, to develop accuracy and insight. While historical conditions are not neglected, the weight of emphasis is placed upon the permanent qualities of literature as an artistic expression of life. To know what some one has said about a great author is deemed to be of less importance than to know what a great author has said for himself.

Students who present acceptable evidence of having satisfactorily studied the works now generally prescribed for admission to American colleges and universities, or the equivalent of those works, may receive credit for the course in English readings given in our preparatory year and for the course in English classics given in the first year. The works prescribed are divided into two groups—one for intelligent reading and one for careful study. The lists for the next two years are as follows:

I. FOR READING: (1) Shakspere—As You Like It, Henry V, Julius Cæsar, Merchant of Venice, Twelfth Night. (2) Bacon—Essays; Bunyan—Pilgrim's Progress; Addison—Sir Roger de Coverly Papers; Franklin—Autobiography. (3) Chaucer—Prologue; Spenser—Færie Queen; Pope—Rape of the Lock; Goldsmith—The Deserted Village. (4) Goldsmith—The Vicar of Wakefield; Scott—Ivanhoe; Hawthorne—The House of Seven Gables; Thackeray—Henry Esmond; Mrs. Gaskell—Cranford; Dickens—A Tale of Two Cities; Eliot—Silas Marner; Blackmore—Lorna Doone. (5) Irving—Sketch Book; Lamb—Essays of Elia; De Quincey—Joan of Arc and The English Mail Coach; Carlyle—Heroes and Hero Worship; Emerson—Selected Essays; Ruskin—Sesame and Lilies. (6) Coleridge—The Ancient Mariner; Scott—The Lady of the Lake; Byron—Mazeppa and The Prisoner of Chillon; Palgrave—Book IV of The Golden Treasury; Macaulay—Lays of Ancient Rome; Poe—Poems; Lowell—The Vision of Sir Launfal; Arnold—Sohrab and Rustum; Longfellow—The Courtship of Miles Standish; Tennyson—Idylls of the King.

II. FOR CAREFUL STUDY: Shakspere — Macbeth; Milton — Minor Poems; Burke—Speech on Conciliation with America, or Washington—Farewell Address, and Webster—First Bunker Hill Oration; Macaulay—Life of Johnson, or Carlyle—Life of Burns.

The examination for credit in English readings will usually consist of a paragraph or two on each of several topics drawn from group I or from the list given on page 121 of the catalogue, under the heading "English Readings." Ten of the works mentioned in list I above will be chosen for this part of the examination—one or two works from each of the six groups in the list. The treatment of the topics should show a general knowledge of the books read, and especially should reveal the candidate's power of clear and accurate expression.

For credit in English classics the examination will be upon the subject-matter, form, and structure, and presupposes a thorough study of the books in group II or in course I below. Attention is called to the fact that candidates are thus left free to offer for credit either the books mentioned in the lists named above or to substitute others of equal literary value.

Each applicant for admission is expected to present from his instructor a detailed statement of the books read, the time covered in any course, the grades attained, and any exercise book he may have containing compositions or other written work done in connection with his studies in English.

All candidates for admission will be required to give satisfactory evidence that they know how to spell, punctuate and capitalize properly, that they understand the essentials of grammar, and that they have a practical knowledge of the elements of composition. Whatever credits

in preparatory or freshman English shall be given will be determined partly by such evidence and partly by the examinations described above. The aim will be to assign each student to that study which he is prepared to pursue with most profit.

All applications for credit in English should be presented at the beginning of the first term of attendance.

Of the studies described below, Nos. 1, 2, 3 and 4 are required in all courses; No. 5 is required in all but the domestic science and art course, the printing course and the general science course; Nos. 6 and 7 are required in the printing, the domestic science and art and the general science courses; No. 8 is an elective in all courses that have electives.

1. **English Classics.** First year, fall term. A careful study is made of a number of standard authors of first-class interest and easy style. As far as possible, the selections are read and discussed in class. Character sketches, paraphrases, abstracts, outlines, and analyses, as well as biographical sketches of the authors, are regularly required. The students are given continual opportunity of studying and rendering the best thought in the best forms, and are, at the same time, encouraged to develop their own thought and powers of expression. The course aims to afford practice in composition as well as to give knowledge of the selections read.

Class Readings.—Shakspere's As You Like It, Pope's Homer's Iliad, Milton's Minor Poems, Bunyan's Pilgrim's Progress, Shakspere's Macbeth, The Merchant of Venice, Cody, The World's Greatest Short Stories.

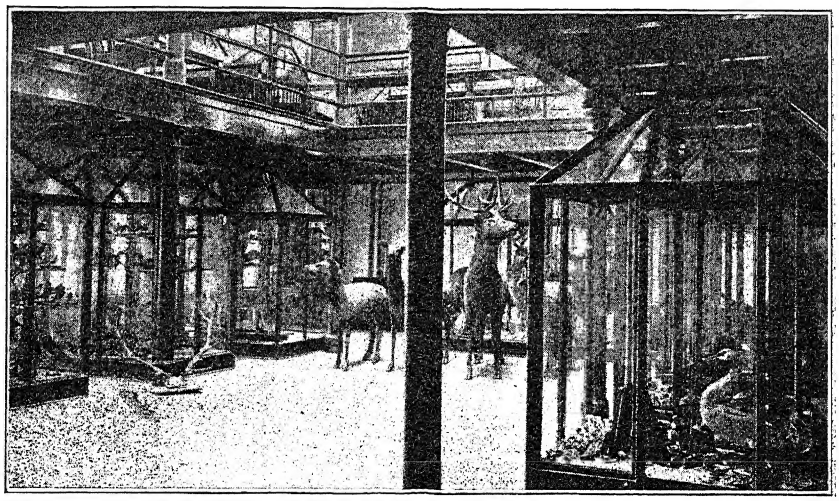
2. **Advanced Composition.** First year, winter term. The work in this course is a continuation and extension of that begun in composition in the preparatory course. Especial attention is paid to precision in the choice of words, to correctness in the various forms of sentence structure, and to unity and coherence in both the sentence and paragraph. Constant practice is given in writing paragraphs and brief themes on familiar topics.

3. **Rhetoric I.** First year, spring term. A continuation and extension of course 2. Further practice is given in paragraph writing. Description, narration and exposition are studied as distinct types of discourse, with constant practice in making outlines and writing themes illustrative of these types. So far as possible the student is trained in the habit of criticizing his own work.

4. **Rhetoric II.** Third term. Study of style and invention. Rhetorical analysis of masterpieces of the various types of discourse. Lectures and discussions on oratorical composition. Practice in making and criticizing plans for arguments and orations. Essays in exposition, argumentation and persuasion, and briefs for debates. Members of the junior class who have credit for the preceding courses or who are graduates of "accredited high schools" with a four-year course may be admitted to this course.

5. **English Literature.** Fourth year. A brief review of the rise and development of English literature, with library study of periods and typical authors. Lectures: The nature of literature; the nature of poetry; linguistic and race contributions to the literature; the great literary periods. Class study, reports, the study of masterpieces. Prerequisite, course 4.

6. **English Literature I.** Fourth year. An outline of the history of the language and literature. Dissertations, both oral and written, on periods and types of literature, on representative writers, and significant movements. Lectures: What is literature? What is poetry? the nature of the drama; the plays of Shakspere; the elements of literary criticism; the beginnings of English fiction; the age of Scott, Burns, and Wordsworth; Tennyson and his age. Members of the class report the lectures and apply principles in the actual study of suitable selections. Extensive



CORNER OF MUSEUM.

study of such writers as Shakspere and Thackeray out of class, and intensive study of somewhat difficult poetical selections in class, with reports and informal discussions. Prerequisite, course 4.

7. **English Literature II.** Continuation of course 6. The plays of Shakspere by the seminary method; reports and discussions; principles of Shaksperian criticism; linguistic elements and tendencies of the lowland Scotch, with illustrations from the poetry of Burns. Critical study of typical productions of such writers as Shelley, Burns, Thackeray, Tennyson, Browning. Principles of Browning criticism. Must be preceded by course 6.

ELECTIVE.

8. **American Literature.** Open to students in all courses where electives are offered. A rapid outline and survey of the rise and development of American authorship from colonial times to our own day. Study of the lives of representative men of letters and of their leading works, so far as time will permit. The transcendental movement and the Brook farm experiment. Seminary study of some of the great novels, essays, speeches and longer poems. Critical interpretation of some of the most difficult poems in class. Must be preceded by course 4.

In all the courses in literature it is the aim to arouse and quicken in the students a genuine liking for good literature, to establish a standard by which they may judge intelligently and confidently whether any given production is properly called literature, and to give them enough of a taste of good writings to create in them an appetite for more.

ELECTRICAL ENGINEERING.

Instruction in the course is given by text-book, lectures and laboratory work; the classroom work is carefully illustrated by means of lecture-table apparatus and the projection lantern. The course is designed to provide the necessary preparation for young men who desire to engage in the practical work of electrical engineering.

The course also gives an excellent preparation for men who desire to take up the work of the central station as managers, superintendents, or as consulting engineers.

1. **Theory of Electricity.** Third year, spring term. This course follows and extends the work given in physics IV (electricity). The following are the principal subjects treated: Theory of electrical measurements, induction, hysteresis, capacity, elementary principles of the generator and motor. The work given in this course is fundamental to the more advanced work of the fourth and graduate years. It is intended to give facility in precise measurements and electrical connections. Text-book, Elementary Treatise on Electricity and Magnetism, Foster and Porter, founded on Joubert's Treatise. Prerequisites, integral calculus, physics IV.

Electrical Laboratory.—It is the purpose of the laboratory course to continue the work of the classroom in the application of the principles and methods developed, the experiments being arranged to follow closely the theoretical development of the subject. The experiments include the measurement of current, potential, resistance, capacity, hysteresis, cable-testing, calibration of instruments, photometric tests of arc and incandescent lamps, use of Carey-Foster bridge, battery tests, etc. Especial emphasis is laid on curve-drawing and the interpretation of laboratory results. A number of reference-books are used in this course.

2. **Direct-current Machines I.** Third year, spring term. This is essentially a laboratory course and is a continuation of course I. It includes a thorough study of the elementary principles of direct-current machinery, involving methods of connecting up the different types of machines, starting-boxes, speed-controllers, circuit-breakers and the determination of the simpler characteristic curves. This course must accompany or follow theory of electricity.

3. **Direct-current Machines II.** Fourth year, fall term. A continuation of course 2, including a detailed study of the principles of direct-current machinery, laws of the magnetic circuit, a careful study of efficiency, regulation and characteristics of the different types of machines, involving proper management, care and installation. Text-book, Elements of Electrical Engineering, Direct Currents, Franklin and Estey. Prerequisites, direct-current machines I.

Dynamo Laboratory.—A series of experiments is outlined and given to the student as a guide to obtain precise results. The experiments include the determination of generator and motor efficiency, resistance measurements, potential and current curves, etc. Special attention is given to the interpretation of curves and data.

4. **Electrical Instruments, and Calibration.** Fourth year, fall term. The work of this course is designed to familiarize the student with the different types of measuring instruments and their application to electrical engineering testing. The necessary care in handling and connecting up the different measuring instruments is given special consideration.

Standardizing Laboratory.—It is the purpose of this laboratory course to give the necessary practice in calibrating the different measuring instruments with primary and secondary standards of measurement, and to

study the adaptation of the different instruments for special tests, etc. Prerequisite, theory of electricity.

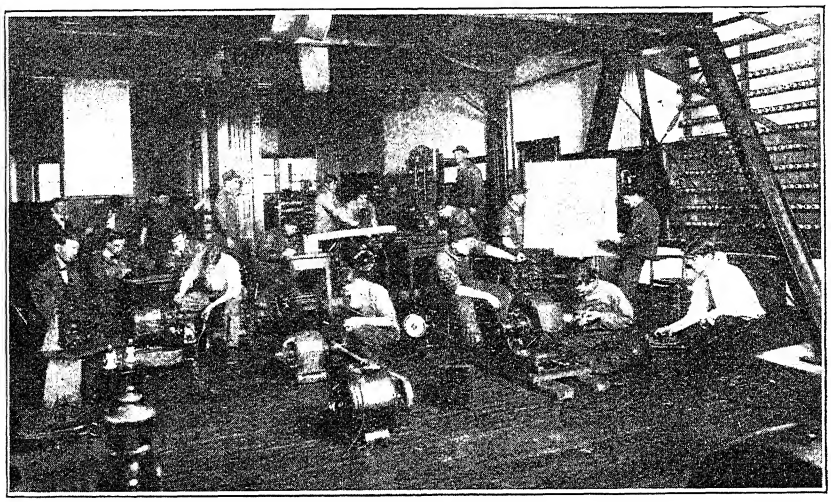
5. **Alternating-current Machinery I.** Fourth year, winter term. Theory and application of single-phase and polyphase alternating currents; the production of alternating electromotive force; study of impedance, capacity, inductance; theory of transformers; methods for testing alternating-current machinery; measurement of power, etc. Prerequisites, direct-current machines II. Text-book, Elements of Electrical Engineering, Alternating Current, Franklin and Estey.

Dynamo Laboratory.—Attention is given to the work of testing alternators, transformers, induction motors, alternating-current arc-lamps, and accessory apparatus.

6. **Direct-current Machine Design I.** Fourth year, winter term. In this course each student is required to make the necessary calculations and working-drawings of such direct-current electrical apparatus as may be assigned to him. The work is based upon a course of lectures. Prerequisites, direct-current machinery I and II.

7. **Alternating-current Machinery II.** Fourth year, spring term. This course is a continuation of alternating-current machines I. It includes a study of the theory of the synchronous motor, synchronous converter, induction motor, and the properties of alternating-current circuits, including resonance, protecting devices, etc. The Vector method of solving alternating-current problems is demonstrated and used throughout the course.

Dynamo Laboratory.—The laboratory is well equipped with the various types of machines, such as alternators, induction motors, synchronous motors, synchronous converters, transformers, etc. A detailed study is made of the operation and efficiencies of the different types of machines. Each student is expected to familiarize himself with the method of conducting the experiment previous to his work in the laboratory. A detailed report and discussion of the laboratory experiment is required, showing the connections used and the results obtained.



ELECTRICAL ENGINEERING.

8. **Alternating-current Machine Design.** Fourth year, spring term. This work embraces the elementary principles underlying the design of alternating-current apparatus. Each student makes a complete design of some piece of alternating-current apparatus or switchboard.

9. **Power Transmission and Electrical Installation.** Fourth year, spring term. The work in this course is based on Bell's Power Transmission, supplemented by lectures and inspection visits. Station design, methods of power transmission, systems of distribution, station management and the installation of machinery are discussed. Text-book, Bell's Power Transmission.

Thesis. A graduating thesis is required on a subject requiring a knowledge of engineering, and approved by the head of the department.

GRADUATE YEAR.

The graduate year is open to students who have completed the work of the four-year course in electrical engineering, or who are otherwise properly qualified. This course provides one year's systematic work leading to a bachelor's degree in electrical engineering, and offers opportunity to specialize in several related lines of electrical engineering.

Alternating-current Machines III. Fall term. This subject treats advanced work in polyphase machinery and apparatus and polyphase transmission lines.

Telephony. Fall term. This course is intended to be an introduction to telephone engineering. After a brief review of the principles of sound and of alternating-current phenomena involved in telephone practice, a critical study is made of telephone apparatus and circuits with reference to their adaptation to various kinds of telephone service. This is followed by a study of the design and maintenance of telephone lines and central-office apparatus, central-office methods, selection of apparatus and methods of handling telephone traffic. Text-book, Abbott's Telephony.

Laboratory.—In so far as is practicable, the laboratory work will follow closely the discussions in the classroom. Numerous pieces of substation and central-office apparatus will be assembled, tested and operated. Methods of locating telephone troubles are given special attention.

Electric Traction. Winter term. This course is given by lectures and reference to standard texts and current literature bearing on the subject. It includes a study of railway motors, line construction, tractive effort, train performance, controllers, etc. Inspection visits are made during the course.

Station Design. Winter term. Drawings and specifications for a power station in its relation to light and power distribution. A study is made of the equipment of a modern power plant. Each student is assigned a station, the design of which shall provide for certain requirements. The student is thus made familiar with the conditions that affect station design.

Electric Lighting. Spring term. This course is designed to familiarize the student with the subject of power distribution for lighting. Beginning with the power station, the subject is treated in relation to the central-station equipment; lines, transformers, illumination, etc.

An elective is provided for each term. This may be a modern language, subjects selected from the engineering course, or other groups of electives offered.

EQUIPMENT.

The electrical laboratory for the work of the third year is well provided with standard instruments of measurement, including standards of resistance, self-induction, capacity, etc. A complete line of standard makes of ammeters, voltmeters, wattmeters and galvanometers are also

provided. The different laboratories of the department are supplied with electric current from the following sources: 120-volt storage-battery circuit, 110-volt direct-current circuit, 110-volt alternating-current circuit, 220-volt direct-current circuit. Voltages up to 60,000 can be produced in the dynamo laboratory for testing purposes.

The dynamo laboratory is provided with a number of standard commercial machines, among them a 30 k. w. 2300-volt polyphase alternating-current generator, a 15 k. w. 125-volt alternating-current polyphase generator, a 7½ k. w. synchronous converter, single- and three-phase induction motors, a 5½ h. p. phase-wound induction motor, a 20 h. p. auxiliary pole 220-volt direct-current motor, a 26 h. p. 220-volt direct-current motor, a 15 h. p. 220-volt direct-current motor, an 8 h. p. 220-volt Stow motor, a 15 k. w. 125-volt generator, a 4½ k. w. 125-volt direct-current generator, a Wood arc machine, a 60-cell 160 ampere hour storage battery, current transformers, arc-lamps, constant potential transformers, 20,000 and 60,000-volt testing transformers, marble and slate switchboards, a Tirrell regulator, speed controllers, a full line of ammeters, voltmeters, wattmeters, etc., for testing purposes.

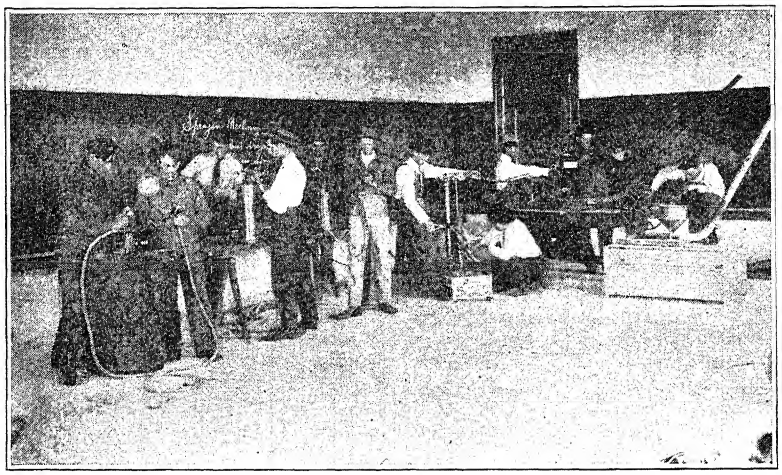
ENTOMOLOGY, ZOOLOGY AND GEOLOGY.

Both for general culture and for preparation to become a specialist in agricultural lines, the need of a knowledge of animal life and of an acquaintance with the meaning of the great earth features is obvious. The fundamental facts of zoölogy not only serve to broaden the student's outlook, but underlie the special work on animal life peculiar to his course, while those of geology likewise awaken him to a knowledge of things about him and at the same time form a basis for his study of soils and minerals. Insects have shown themselves so well able to reap the fruits of man's labor that, to the equipment of a student in agricultural lines or domestic science, the study of these small but important friends and foes has become necessary. The study of insects is also well fitted to give that training in close observation and discrimination so useful in any walk of life.

1. **Zoology I.** (Invertebrate.) This course will be given fall, winter, and spring. This is a study of the structure, functions and ecology of the types of invertebrate animals, with due attention to the questions of descent and systematic position. The class work will consist of five recitations per week for one term, based upon a suitable text-book, supplemented by facts derived from laboratory study. The practical exercises will consist of four hours' study per week of the structure and physiology of the most significant types. Text-book, T. W. Galloway's First Course in Zoölogy. Laboratory manual, Theo. H. Scheffer's Laboratory Manual of Zoölogy.

2. **Zoology II.** (Vertebrate.) This will be given the winter term. This is a study of the structure, functions and ecology of the more important types of vertebrate animals, also with due attention to the questions of descent and systematic position. The class work consists of two and three recitations in alternating weeks, based upon a suitable text, supplemented by facts derived from laboratory study. The practical exercises consist of four hours per week devoted to the first-hand study of structure and functions of the most significant types. The text-book and laboratory manual are the same as those for course 1. Course 1, or its equivalent, is prerequisite.

3. **Embryology.** This course will be given the winter term. This is a study (1) of the changes of the reproductive cells prior to fertilization, giving attention to the cell elements as possible bearers of hereditary characters; (2) of the embryonic development of the vertebrate animal as typified in the chick and some mammalian type. The class



SPRAYING MACHINES.

work will consist of five recitations per week, based upon a suitable text, supplemented by facts derived from laboratory work. The practical exercises will consist of a close study of the reproductive cells and typical vertebrate development. Text-book to be determined later. Courses 1 and 2, or their equivalents, are prerequisite.

4. **Geology.** Given fall and spring terms. This is an elementary study of the dynamic, structural and historical phases of the earth and primitive life, with special attention given to the first two. This includes classroom work, with occasional field trips, and consists of five recitations per week, based upon a suitable text, and abundantly illustrated with museum material. Text-book, Le Conte's Elements of Geology.

5. **Entomology I.** (General.) This course is given fall, winter, and spring terms. This is a study of general structure and physiology of insect life, with especial attention to classification, to the life-economy and remedial measures for the great insect pests. The class work consists of five recitations per week, based upon a suitable text, supplemented by facts derived from laboratory work, and abundantly illustrated by pictures and museum material. The laboratory work will consist of four hours per week study of elementary anatomy and physiology of insect life, and of classification to families of a set of insects representing the important orders. Text-book, Comstock's Manual for the Study of Insects. Course 1, or its equivalent, is prerequisite.

6. **Entomology II.** (Economic.) Given fall term. This is a study of important injurious insects from the point of view of the investigator, and is intended not only to bring the student into direct contact with the forms themselves but also to familiarize him with economic literature. This course will consist of two and three recitations per week, alternating, and four hours a week in the laboratory. Courses 1 and 5, or their equivalents, are prerequisite.

7. **Entomology III.** (Systematic.) Given fall and spring terms. This is wholly a laboratory course, consisting of four hours per week for one term. It is arranged to familiarize the student with common methods of insect classification, to teach him readiness in the use of literature, and to introduce him to a more extended systematic study of

a chosen group of insects. The student will be expected to make a collection for himself. Text-book, Comstock's Manual for the Study of Insects. Courses 1 and 5, or their equivalents, are prerequisite.

8. **Entomology IV.** (Histology of insects.) Given winter term. This is a study of the cell structure of the tissues composing the insect body. It is purely a laboratory course, and will occupy four hours per week for one term. Courses 1, 5, 6 and 7, or their equivalents, are prerequisite.

9. **Entomology V.** This is given at time to be arranged. This is a study of gross structure, physiology and development of insects. It will consist of alternately two and three recitations per week for one term, based upon a suitable text, and supplemented by facts derived from laboratory study. The practical exercises will consist of four hours per week spent in the dissection of insect types and a close study of embryological development. Text-book to be selected. Courses 1, 5, 6, 7 and 8, or their equivalents, are prerequisite.

10. **Entomology VI.** Given at time to be arranged. This course consists of an independent study of some definite problem in insect life. Courses 1, 5, 6, 7, 8 and 9, or their equivalents, are prerequisite.

11. **Parasitology.** This course is intended primarily for students of veterinary medicine, and will consist of five recitations per week on the life-history, injury and remedial and preventive treatment for the more important internal and external parasites of domestic animals. The laboratory exercise of two hours per week is designed to familiarize the student with the typical and seriously injurious forms. Zöology I and anatomy I, II and III are prerequisite.

12. **Geology II.** This course will be given during the fall term. It will consist of a study of the structural and dynamic phases of geology and of the mineralogical composition and the physical properties of rocks important to the engineer. The class work will consist of five recitations per week, based upon suitable texts. The practical exercises will include a first-hand study of the most important rocks. The geological side will be given by this department and the petrographic by the department of chemistry. This course is intended for civil engineers only.

GERMAN.

In whatever line the modern student turns his energies a practical knowledge of German is very useful, often indispensable. In literature, the arts, and the sciences, much of the newest and best work appears in German, so that he who would keep abreast of the times is forced to acquire at least the rudiments of that language. It is planned to have the work in this department as practical as possible, without, however, excluding the growth in the pupils of a love for literature. The tendency toward introducing German classics into second- or even first-year courses is becoming too frequent; students who have "mastered" Faust are too often unable to make the most commonplace remarks in German or to read current German literature fluently.

The courses should be taken in the order given here. In exceptional cases, with the consent of the instructor, students may be assigned to any course after having completed the first three. Courses I, II and III are required in the undergraduate domestic science and art and general science courses, and in the graduate agronomy, animal husbandry, horticulture, mechanical, electrical and civil engineering, architecture and printing courses; IV is required in the domestic science and art course and elective in the general science course; V and VI are elective in the domestic science and art and general science courses, and VII is elective in the domestic science and art course.

1. **German I.** Second year, fall or winter term. After two recitations given to learning the sounds of the German letters, the pupil at once begins reading. Vocabularies are learned from the start. Grammar is learned gradually, with the reading lessons, in such a way as not to discourage the pupil. Oral and written work and simple conversational exercises begin with the first reading lesson. The present, perfect, preterit (past) and pluperfect (past-perfect) tenses of the indicative mood, active voice, are studied, as are also the inflections of the various kinds of pronouns and declensions of strong, weak and mixed nouns and adjectives. Frequent reviews are taken to enable the student to digest the facts presented. The abundant conversational and written work taken up serves the same end. Text, Becker's Elements of German (first twenty-six lessons).

2. **German II.** Second year, winter or spring term. Pupils are drilled on grammatical points already gone over in German I. The remainder of the more important points of grammar are studied, the remaining tones of the verb, both active and passive, reflexive verbs, modal auxiliaries, comparison of adjectives, etc. The general plan of the work is the same as in the preceding term. Essential facts of grammar are insisted upon, but German is taught as a living language. Conversations and written exercises are frequent. Text, Becker's Elements of German (completed).

3. **German III.** Second year, spring term. More stress is laid on translations into good idiomatic English than heretofore, and the passages read are of increased length. There is oral work on each exercise read, and occasional translations into German. Such selections are read as will give something of an insight into German manners and customs. A few of the most popular songs are studied. Some of the chief treasures of German mythology and saga are taken up, as well as extracts from German history. Whenever a tendency to drag is noticed, one of the anecdotes given in the appendix will be read. Text, Müller and Wenckebach's Glück Auf.

4. **German IV.** Third year, fall or winter term. Reading of recent comedies of considerable literary merit, up-to-date one-act plays, which are lively, real, and full of a clean sort of fun. Three or more of the following are read, and conversational exercises are based on them: Julius Rosen's Ein Knopf, Gustav von Moser's Ein amerikanisches Duell, Hugo Müller's Im Wartesalon erster Klasse, and Emil Pohl's Die Schulreiterin. Text, Manley's and Allen's Four German Comedies.

5. **German V.** Third year, winter term. Conversation and composition course. Practice in the use of every-day German. Text, Kron's German Daily Life.

6. **German VI.** Third year, spring term. Continuation of course V.

7. **German VII.** Third or fourth year, spring term. A study of several classics.

HISTORY AND CIVICS.

Training for citizenship is a constant purpose of the work in the department of history and civics. Though not many courses are offered, yet it is believed that the very best from the whole field have been selected, and that they are successfully accomplishing the desired results. It is to be noted that each student, before taking up the work here outlined, is required to have completed the work in ancient, medieval and modern European history, as well as the preparatory United States history, as outlined in this catalogue under the title "Preparatory Department."

The department of history and civics offers three courses between the second term of the junior year and the second term of the senior year,

inclusive, as follows: English history is required in the printing, general science and domestic science and art courses; American history is required in all courses, and must be preceded by the course in civics, which is required in all courses.

1. **English History.** Junior year, winter or spring term. This course traces the story of England's wonderfully interesting growth from the Britain of the earliest times up to the British empire of to-day. Emphasis is laid on the political and constitutional development, but the industrial and social elements are not overlooked. One of the especially interesting features of this course is the study of England's institutions and government as her colonial empire emerges, and the conditions under which the United States of America becomes independent of England. This is primarily a text-book course, with Coman and Kendall as the text; but supplementary reading is required, especially from Green's Short History of the English People. Lectures are given on contemporary continental institutions, movements and conditions, as far as the limited time will permit.

2. **Civics.** Junior year, winter or spring term, or senior year, fall term. This course is introduced by a very brief study of government in general and of our colonial governments, followed by a more careful study of the articles of confederation and the adoption of the constitution, in so far as these seem essential to a clear understanding of our present government. The work of the term is chiefly devoted to a careful study of our national constitution and of the actual government under that instrument. Constant comparison is made with our own state government. Current events and incidents from history are used to illustrate the various principles until the every-day affairs of our government are made clear, practical and familiar. Comparison with other governments, especially with that of England, is made whenever this seems helpful. Selected cases from the United States supreme court reports are studied. Text-book, Hinsdale's American Government. References: Cooley's Principles of Constitutional Law, Boyd's Cases on Constitutional Law, Bryce's American Commonwealth, Hart's Actual Government, the national and state statutes, etc. A civics guide-book of questions and references, prepared by the department, is used by each student as an aid to the greater efficiency of the work in this course. Whenever possible this course should be preceded by course 1.

3. **American History.** Junior year, spring term, or senior year, fall or winter term. This is an advanced course in the history of America, especially from 1760 to 1860. This course is introduced by a thorough study of those causes and conditions that led to the war of American independence. The treaty of 1783, the governmental and political conditions during the confederation period, the convention of 1787 and the struggle for the adoption of the new constitution, are next carefully examined; but the major part of this course is devoted to the period under the constitution. The brevity of the course requires judicious selection of the points to be emphasized, and the following lines of our national history are especially studied: The establishment of the nation and the organization and functions of the various departments of its government; the important presidential elections; Hamilton's financial measures, taxation, banks, internal improvements; history of political parties, their issues and their leaders; foreign relations and their connecting links between Europe and America, as in the Monroe doctrine; the slavery question compromises, the laws and the constitution; nullification and secession throughout our history; annexation and government of territories; national boundaries; the growth and development of the West, with a study of its influence on our national character and history; the early Kansas struggle; civil war, reconstruction, and the new nation. Since this course so largely involves a study of the practical application of our constitution in operation, it must be preceded by the

course in civics. Channing's Student's History of the United States and Elson's History of the United States are used as text-books; but this is primarily a library course, and each student uses an American history note-book of topics and references, prepared by the department, as an aid to larger and more thorough work in the term devoted to this subject. Prerequisite, course 2.

HORTICULTURE.

1. **Horticulture.** Second year, winter term. The work of this term presents the principles of the art, introducing the facts underlying the methods of general practice in nursery, orchard and garden work. The text-book, Goff's Principles of Plant Culture, is supplemented by lectures which are intended to adapt the general principles to the particular conditions which the student is likely to meet.

Laboratory.—For students of the agricultural courses, this work consists of practice in nursery, garden and orchard work, including setting grafts and cuttings, transplanting both small and large trees, spring pruning, construction and care of hotbeds and cold-frames, testing and planting seeds, preparation of garden soils, use of garden tools, making and application of spray mixtures, and the use of spray machinery.

Laboratory for students of the domestic science course consists of the work of propagating, potting and caring for window and greenhouse plants, sowing of seed and transplanting hardy plants. The student is required to become reasonably familiar with the various window and greenhouse plants and to become acquainted with the best species for outdoor gardening, including planning and planting beds and borders.

2. **Pomology I.** Senior year, fall term. The work of this year comprises a careful study of the classification of fruits, a systematic study of varieties, the means of identification, their variation in plant and fruit under different conditions of soil and culture, and their botany and history. Waugh's Pomology is used as a text, and work with fruits is made a part of the course.

Laboratory.—Careful study and detailed descriptions are made of numerous varieties of grapes, plums, pears, apples, and persimmons. Observations are taken and descriptions made of the trees in their development from nursery to bearing orchards.

3. **Fruit-growing.** Senior year, winter term. A study of the soil conditions and soil fertility in relation to fruit-growing. Influence of exposure and windbreaks, methods of planting, influence of cultivation and cover crops. Thinning. Picking and packing, storing and marketing. Text, Bailey's Principles of Fruit-growing. Lectures and references.

Laboratory.—Spray machines, materials and mixtures.

4. **Vegetable-gardening.** One-half term. Senior year, spring term. The work of this term is devoted to a study of methods of field operations, including use of fertilizers, seed selection, means of securing sanitary conditions, and a brief study of varieties. Text-book, Bailey's Principles of Vegetable-gardening.

Laboratory.—The student is given practice on seed testing, seed sowing, use of garden tools, mixing fertilizers, construction of hotbeds and cold-frames, transplanting and preparation for market.

5. **Landscape-gardening.** One-half term. Senior year, spring term. The principles of this art are studied in relation to their application to the planning and planting of home grounds, streets, parks and cemeteries. The value of various trees, shrubs, annual and perennial herbaceous plants for securing desired effects taken up in detail, with special reference to their use under differing climatic and soil conditions.

Laboratory.—Plans for home grounds of various sizes, school grounds, cemeteries and public parks.

GRADUATE.

6. **Pomology II.** A study of methods of packing, marketing, transportation and storage. Effects of storage upon varieties comprises the work of the first half-term. In the second half-term a study of the literature of pomology is begun.

Laboratory.—A study of the citrus fruits and commercial varieties of tropical and subtropical varieties.

7. **Fruit-growing II.** This term's work takes up the history and development of the small fruits, their care and culture; effects of fertilizers and irrigation; methods of pruning and training bush fruits; planting for pollination and effects of cross-pollination.

8. **Landscape-gardening II.** An acquaintance with the literature of the subject is formed during this term, and methods of making detailed plans and estimates for landscape problems are taught. The study of species of trees and shrubs, their uses and combinations, is continued.

Laboratory.—Consists of detailed plans for lawns, parks, cemeteries and grounds of public buildings.

FORESTRY.

Forestry. One term. Text-book, Fernow's Economics of Forestry. During this term the economic and esthetic importance and value of forests, the forest as a source of lumber, posts, poles, ties, resin and turpentine, is emphasized and studied. The forest as a condition; that is, a factor that influences water flow, soil fertility, conservation of moisture, a preventer of floods, a modifier of temperature, wind velocity and moisture content of air, is treated. The historical development of forestry is dwelt upon, explaining and setting forth the differences and conceptions of forest and forestry, and our understanding of the methods of reproduction and regeneration, the systems of forest management, and the utilization and production of forests. A study is made of the comparative values of

YOUNG CATALPAS.

agricultural pursuits and forestry as a business. The practical and legislative development of forestry in all the important countries of the world is studied in detail.

Laboratory.—The work consists of the fall work in pruning and protecting trees, shrubs and vines; the collecting and handling of seeds; indoor methods of propagation, including the making and storing of grafts and cuttings.

Dendrology. One term. Lectures, and text-book, Sargent's Manual of Trees of North America. This term's work consists of a taxonomic and biologic study of the important timber-producing trees grown in this country and a number of foreign species. The bud, leaf, flower, fruit, and bark, and the forms of the different species of trees, are examined and studied, so that the student may become so familiar with these trees that he is enabled to recognize them in their winter and summer condition. The behavior of these many different species of trees under the several factors of environment, as wind, heat, cold and different characters of soil, is noted. Attention is given to the rate of growth, the tolerance, the form of the root system, the form of bole and crown, and any particular or peculiar characteristics of bark, wood, or manner of reproduction.

Laboratory.—This consists of observations made in the field, and in the classroom a more minute study, including drawings of the bud, leaf, flower and fruit of the tree. It is the aim that a student shall be so trained as to enable him to recognize trees. A valuable aid to the acquisition of this knowledge is a large acreage of valuable timber plantings that consists of most of the important trees of this country, which is available for examination and study by these students.

Silviculture. Two terms.

Silvics. *First term.* This term's work embraces a thorough technical study of the factors of environment that influence development and distribution of trees. Special emphasis is placed upon the effects produced upon tree growth by varying degrees of heat and cold, movement of the air, moisture contents of air and soil, altitude and exposure, physical and chemical properites of soils, various insects and larger animals, and diseases. The student is taught how these factors influence the size, form, rate of growth, quality of timber produced, and reproduction and distribution of our forest-trees.

Laboratory.—Designed to point out and emphasize the silvical characteristics of trees, and the influence or effects produced by the factors of environment on these trees, as noted in the lectures and research work in the library.

Practical Silviculture. *Second term.* The important points studied during this term are the making of tree-seed germination tests, preparation and care of nursery seed-beds, and the care and planting of seedlings and cuttings. Part of the term is devoted to study as regards the management of forests by thinning cuttings, improvement cuttings, and reproduction cuttings.

Laboratory.—This includes the actual preparation of nursery seed-beds, sowing of seed, transplanting of cuttings, and making of thinning, improvement and reproduction cuttings.

Mensuration. Text-book, Mensuration, by Graves. This is a study of the methods used for determining the rate of growth of trees and stands, the volume of stands of trees and logs, and the age of trees and stands. The student is required to master the important log rules, the strip method, the Michigan method, the sample-plot method, and the method by eye of investigating and computing the volume of standing timber. As an aid to this the natural and artificial plantings of timber on the College farm and in the vicinity afford the student an opportunity to learn the fundamental principles of mensuration.

GRADUATE.

Forest Technology. Laboratory, lectures, and text-book, Boulger's Woods. The student is required to make a study of the histological and mechanical properties of the woods of our economic forest-trees. A thorough study is made of the cellular structure, the weight, hardness and mechanical properties, such as stiffness, toughness, brittleness, elasticity and durability of these woods. The fitness of any particular kind of wood for special purposes is determined.

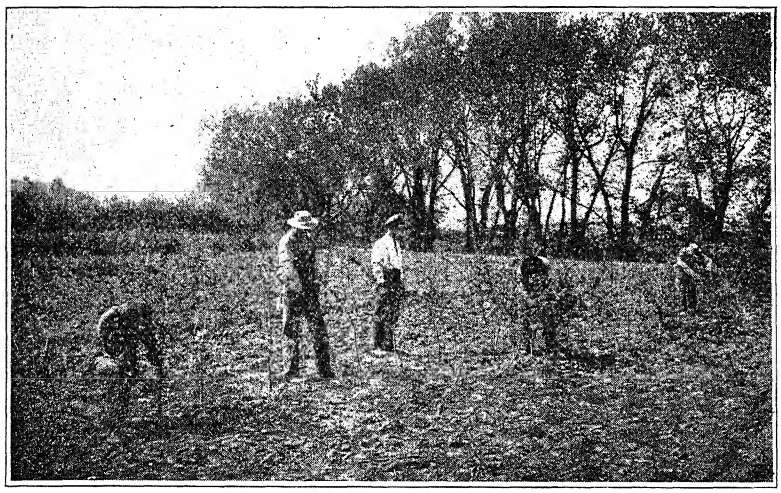
Forest Management. Laboratory. This includes the survey and making of a given timber tract, the examination of this tract as regards soil and the species of timber; the determination of the age and volume of the young and merchantable timber, including description of the various types that may be there; plans for cutting and lumbering marketable timber; and the protection of forests against fire, wind, grazing, insects and disease.

Forest Protection. Lectures. The value, importance and necessity of protection of forest property is emphasized. The destroying agents are pointed out, and the nature and severity of the effects produced by wind, fire, insects, diseases, heat and cold, and the grazing of animals are explained, and the natural ability of a given species to withstand attacks of these facts is made clear; attention is also given to methods of preventing or combating injurious effects either by methods of planting, management, harvesting, or the use of artificial or external means, such as spraying, sanitary measures, and the making of fire lanes.

FLORICULTURE.

Greenhouse Construction and Heating. Fall term, senior year. This term's work deals with the construction of modern greenhouses, the advantages and disadvantages of different types of houses, the value and comparative cost of materials, and the construction of benches. It also takes up in detail the heating and ventilation and the comparison of different methods as to efficiency and cost.

Greenhouse Management. Winter term, senior year. This study



NURSERY STOCK.

takes up in detail the care of various groups of plants and individual species in the various groups in regard to soil, temperature, moisture, and effects of fertilizers.

Planting and Bedding Plants. Spring term, senior year. This term's work takes up the general principles of bedding and borders, planting and arranging of plants in beds in respect to color and method of growth, design bedding and carpet bedding, and massing of larger plants for best effects.

LIBRARY ECONOMY.

An apprentice course in library economy is offered general science students as an elective in the junior and senior years. This course consists of four hours a week of practice work in the library under the supervision of the librarian and assistants, and includes the consideration of the following subjects:

FIRST YEAR.— Library handwriting, accession work, classification, shelf-listing, alphabeting, mechanical preparation of books for the shelves, care of periodicals and pamphlets, loan-desk work, elementary reference work, and typewriting.

SECOND YEAR.—Advanced reference work, cataloguing, bibliography, book selection, and ordering.

Reading work will be assigned each year on the history of books and printing, the history of libraries, and other subjects relating to the library.

MATHEMATICS.

It is the aim of the department of mathematics to give a thorough training in a small number of subjects, and to develop in the student the ability to attack new problems successfully rather than to burden his mind with a large number of facts and special methods. The work is directed primarily with the following ends in view: (1) The attainment of mental power and accuracy in the service of general culture; (2) the acquirement of facts and processes that will furnish the student a valuable tool in further scientific and technical study. The following statement contains a brief description of the courses to be given: Nos. 1 to 3 are required in all courses; Nos. 1 to 7 in the engineering and architecture course; Nos. 1 to 8 in the civil engineering course.

1. **Geometry I.** First year, fall term. Text-books, with exercises for original demonstrations.

2. **Geometry II.** First year, winter term. Continuation of course 1. Fourth, fifth, sixth, seventh and eighth books, treated as before, with special attention to original work.

3. **Plane Trigonometry.** First year, spring term. Text-book, Wentworth. Solution of plane triangles, essentials of goniometry, applications to surveying and navigation.

4. **Algebra IV.** Second year, fall term. Text-book, Wells's New Higher Algebra. Binomial theorem, undetermined coefficients, logarithms, and general theory of equations.

5. **Analytical Geometry.** Second year. Rectangular and polar coordinates; the straingy line, circle, parabola, ellipse, hyperbola, and general equations of the second degree.

6. **Differential Calculus.** Second year, spring term. Text-book, Osborne. The various methods of differentiation, with the usual applications.

7. **Integral Calculus.** Third year, fall term. Same text. Integrations, with applications to curves and surfaces.

8. **Spherical Trigonometry.** Third year, winter term. Wentworth's text. Development of formulas, solution of problems, and applications to astronomy.

9. **Astronomy.** Third year, winter term. Some general conceptions of the subject, with a brief treatment of problems connected with the celestial sphere.

MECHANICAL ENGINEERING.

The subjects in this course are adapted primarily to the needs of the students in mechanical engineering, but a few subjects are introduced to meet the requirements of the other courses. The subjects are so arranged that the student first learns, in the classroom, the principles upon which the action of a mechanism depends, and afterwards studies the action of the same mechanism in the laboratories and shops.

In the mechanical engineering course all numbers below are required but 35, 37, 41, 44, 45, 47, 48 and 49.

In the civil engineering course Nos. 1, 2, 3, 5, 7, 8, 16, 18, 21, 23, 24, 27, 32, 35, 37, 39, 41, 42, 43, and 44 are required.

In the electrical engineering course Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14, 15, 18, 19, 24, 25, 32, 44, 45 and 46 are required.

In the architectural course Nos. 1, 2, 3, 5, 7, 8, 24 and 46 are required.

In the printing course Nos. 1, 2, 3, 12 and 49 are required.

In the general science, veterinary, dairy and poultry courses Nos. 1, 2 and 3 are required.

In the agricultural and animal husbandry courses Nos. 1, 2, 3 and 49 are required.

In the horticultural course Nos. 1, 2, 3 and 48 are required.

1. **Woodwork I.** First year, fall term. A graded set of problems in joinery is given, together with practice in working to dimensions, and the proper use and care of bench tools. Tools required: Two-foot pocket folding rule.

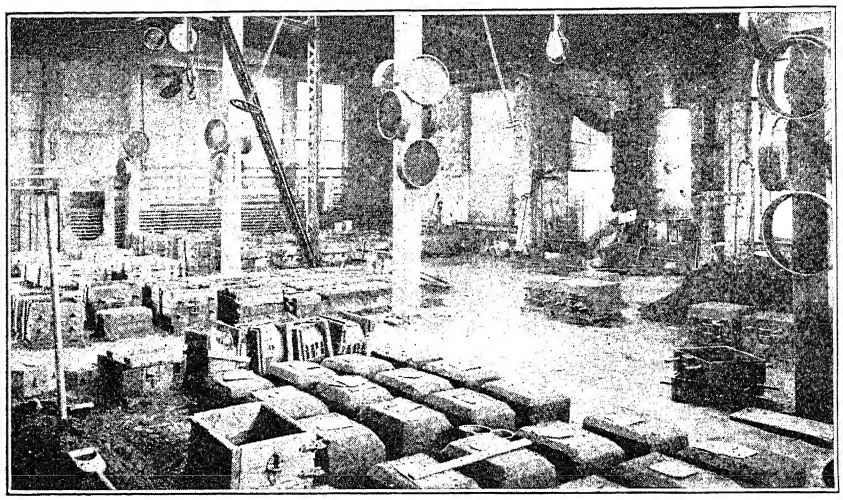
2. **Woodwork II.** First year, winter term. This work is a continuation of that given under woodwork 1.

3. **Blacksmithing I.** First year, spring term. A graded set of problems designed to teach the operations of drawing, upsetting, welding and forming, accompanied with instruction in the care of fires and the behavior of iron at different heats. Preparation required, woodwork II. Tools required: Two-foot rule, one pair of five-inch outside calipers.

4. **Blacksmithing II.** Second year, fall term. Advanced work in the forging of iron and the manufacture of steel tools. Instruction is given in tempering, case-hardening, and annealing. Tools required: Two-foot rule, one pair of five-inch outside calipers.

5. **Mechanical Drawing I.** Second year, winter term. Exercises in lettering, shading and the drawing of simple mechanisms. Each student is expected to provide himself with the following drafting supplies: Triangles, T-square, scale, pencils, pens, ink, erasers, thumb-tacks and drawing instruments. It is desired, however, that the supplies be not purchased until after consultation with the instructor in charge of the work. Preparation required, descriptive geometry. Text-book, Adam's Mechanical Drawing.

6. **Foundry.** Second year, winter term. Foundry practice is given in both floor and bench molding, including the making of cores, brass and iron castings, and the mixture of special alloys. Cupola practice and the making of machine castings for shop use are included.



FOUNDRY.

7. **Kinematics I.** Second year, spring term. An elementary course in mechanisms, particularly the principles involved in the construction of gears, cams and quick-return motions. Preparation required, Trigonometry. Text-book, Schwamb and Merrill's Treatise on Mechanism.

8. **Mechanical Drawing II.** Second year, spring term. Drawing of simple parts of machines from plates and models. Particular attention is given to the arrangement of views on the plate, to the titling, to the lettering of notes, and to the accuracy of the drawings. Text-book, Adam's Mechanical Drawing.

9. **Pattern-making.** Second year, spring term. This term's work includes wood-turning and pattern-making. Each student is required to turn several specimens and make various patterns. Tools required: One two-foot rule, one pair three-inch dividers, one pair five-inch outside calipers, one pair five-inch inside calipers, one six-inch scale.

10. **Kinematics II.** Third year, fall term. A continuation of the work of the previous term, dealing particularly with trains of gearing, linkages, and combinations of mechanisms in general. Preparation required, kinematics I, mechanical drawing II. Text-books, Schwamb and Merrill's Principles of Mechanism and Kerr's Power Plants.

11. **Mechanical Drawing III.** Third year, fall term. A continuation of mechanical drawing II, and practice in machine-drawing. Text-book, Adam's Mechanical Drawing.

12. **Machine-shop I.** Third year, fall term. Practice in chipping, filing, scarping, and laying out work from drawings. Tools required: A six-inch scale, a four and one-half to six-inch square. Students are advised to purchase a combination square.

13. **Steam Engineering I** (Valve-gears). Third year, winter term. A study of the design, construction and operation of the valve gears and linkages of steam- and other engines. Preparation required, kinematics

and integral calculus. Text-book, Peabody's Valve Gears for Steam-engines.

14. **Mechanical Drawing IV.** Third year, winter term. Drawing from sample plate, but to an enlarged scale, a detailed working-drawing of a horizontal multitubular boiler and setting.

15. **Machine-shop II.** Third year, winter term. Instruction in lathe work, boring, and drilling. Tools required: One two-foot rule, one six-inch scale, one pair three-inch dividers, one pair five-inch outside calipers, one pair five-inch inside calipers, one center-gage, one center-drill.

16. **Applied Mechanics I.** Third year, spring term. The first few days are devoted to a rapid review of analytical mechanics, followed by study of the mathematical methods of determining centers of gravity, moments of inertia, etc., of surfaces and solids. Study of the analytical methods of determining stresses in roof and bridge trusses and the stresses and moments of columns and beams. Preparation required, physics III and integral calculus.

17. **Mechanical Drawing V.** Third year, spring term. The work this term consists in making a detailed working-drawing of some part or group of parts of a small steam-engine and an assembly drawing of the complete engine. Preparation required, mechanical drawing IV, steam engineering I.

18. **Engineering Laboratory I.** Third year, spring term. Practice in the use, adjustment and calibration of laboratory instruments, tests on the efficiency of hoists, calibration of gages, use of dynamometers, and experiments in strength of materials. Preparation required, applied mechanics I (may be taken the same term).

19. **Machine-shop III.** Third year, spring term. Advanced work on lathes, planers and milling-machines, including gear-cutting.

20. **Steam Engineering II** (Thermodynamics). Fourth year, fall term. A study of the thermodynamic principles of perfect gases, saturated and superheated vapors, and the theory of injectors. Preparation required, steam-boilers and definite integration. Text-books, Peabody's Thermodynamics of the Steam-engine and Peabody's Steam Tables.

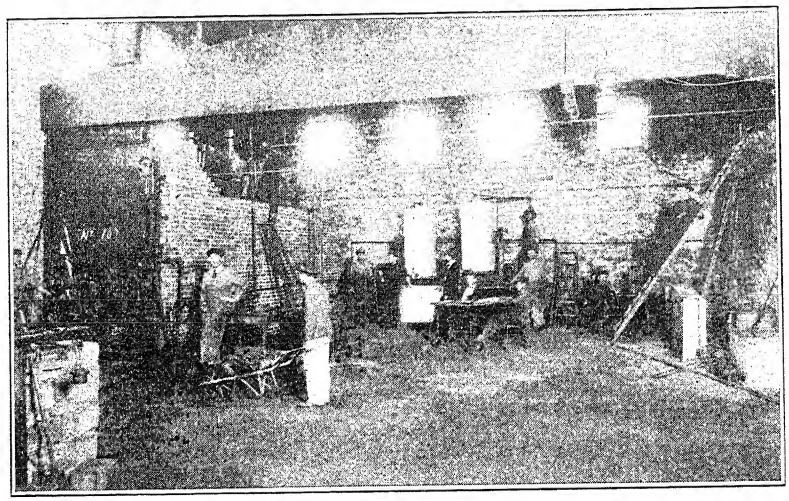
21. **Applied Mechanics II.** Fourth year, fall term. Analytical and graphical methods used in the design of columns, beams, girders and riveted joints. Preparation required, applied mechanics I.

22. **Mechanical Drawing VI.** Fourth year, fall term. The work this term consists in the graphical solution of a problem relating to the reciprocating parts of a plain slide-valve engine and the detailed working-drawing of valve, steam-chest, cylinder, piston, piston-rod, cross-head and guides for the engine. Preparation required, mechanical drawing V and steam engineering I. Text-book, Kent's Mechanical Engineer's Pocketbook.

23. **Engineering Laboratory II.** Fourth year, fall term. Experiments in strength of materials continued, including work with timber, cast iron, wrought iron, steel, babbitt, bronze, and other compositions. Preparation required, engineering laboratory I.

24. **Graphic Statics.** Fourth year, fall term. Graphical solution of problems relating to roof and bridge trusses. Preparation required, applied mechanics I or applied mechanics A or E.

25. **Machine-shop IV.** Fourth year, fall term. The time of this term is devoted to the building of a small machine or making the parts of a large one.



BOILER TESTING.

26. **Steam Engineering III** (Boilers). Fourth year, winter term. A study of the construction, erection and operation of steam-boilers and appliances, including the study of tools. Preparation required, steam engineering I and integral calculus. Text-book, Peabody's and Miller's Steam-boilers.

27. **Applied Mechanics III.** Fourth year, winter term. Strength of shafting, design of springs, friction, mechanics of moving parts, and strength of materials. Preparation required, applied mechanics II and steam engineering I.

28. **Mechanical Drawing VII.** Fourth year, winter term. The design of a modern power-plant installation. In this work the student is expected to select standard commercial types of boilers, stokers, coal-handling apparatus, mechanical draft appliances, boiler auxiliaries, and steam-engines or turbines, and to arrange them in the building or buildings which he has designed for that purpose in such manner as will give the most efficient and economical means of generating power. Preparation required, mechanical drawing VI. In connection with this work he should be taking in class steam engineering III and applied mechanics III.

29. **Mechanical Engineering Laboratory I.** Fourth year, winter term. Tests on cement and concrete, including work with reinforced concrete beams, columns, fence-posts, and bridge sections. In this work the student not only tests the specimens but he designs and builds them. In the second half-term, tests are carried on on gas-engines, air-compressors and refrigerating machinery.

30. **Machine-shop V.** Fourth year, winter term. A continuation of the previous term's work.

31. **Steam Engineering IV** (Thermodynamics). Fourth year, spring term. A continuation of the work of the previous term, including the thermodynamics of gas-engines, air-compressors and refrigerating machines. Preparation required, steam engineering III. Text-book, Peabody's Thermodynamics of the Steam-engine.

32. **Hydraulics I.** Fourth year, spring term. This term's work includes a study of the principles of hydrostatics and the action of water-motors. Preparation required, applied mechanics I or applied mechanics E. Text-book, Merriman's Treatise on Hydraulics.

33. **Mechanical Drawing VIII.** Fourth year, spring term. A continuation of the work of the preceding term.

34. **Mechanical Engineering Laboratory II.** Fourth year, spring term. A series of efficiency tests on boilers, steam-engines or turbines, traction-engines, and producer gas-engines. Complete tests are made, including observations and calculations from the time the coal leaves the bin until the load is taken off from the switchboard. The student is thus enabled to determine exactly what losses occur and where they occur.

35. **Structural Engineering I.** Fourth year, spring term. Theory of stresses developed in arches and continuous girders. Design of structures of wood, metal, stone, and concrete. Preparation required, applied mechanics III.

36. **Mill and Structural Engineering.** Graduate year, fall term. Design of mill and factory buildings with the arrangement of power transmission and the machinery therein. The classroom work is accompanied by work in the drafting-room and laboratories.

37. **Structural Engineering II.** Graduate year, spring term. An extension of that part of the preceding term's work relating to iron and steel, with special reference to the design and construction of bridges and the steel skeleton framework of buildings. Preparation required, structural engineering I.

38. **Power Plant Engineering.** Graduate year, winter term. A study of the design, installation and operation of steam, gas and hydraulic power plants. The drawing-room and laboratory work is devoted to the laying out of installations and to the conduct of efficiency tests of those already installed.

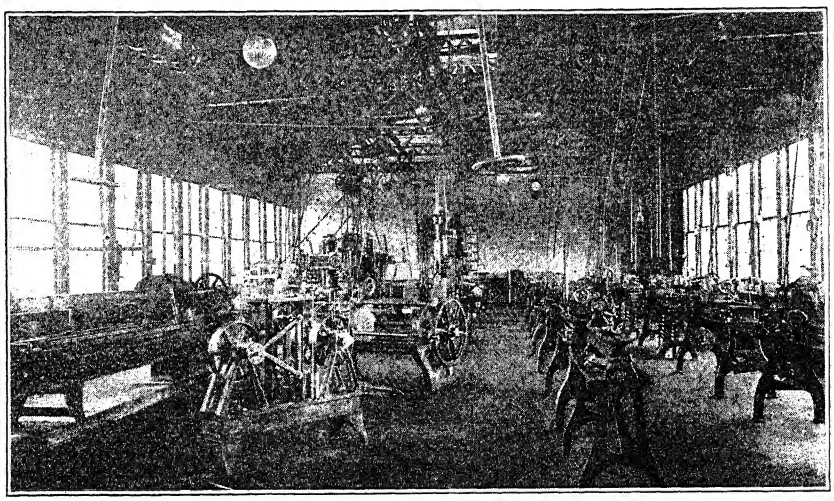
39. **Hydraulics II.** Graduate year, winter term. A continuation of the work of hydraulics I, with particular attention paid to the construction of flumes and conduits, and the design, equipment and erection of hydraulic power plants. Preparation required, hydraulics I, applied mechanics III.

40. **Locomotive Engineering.** Graduate year, spring term. A study of the principles underlying the design, construction and operation of modern locomotives, accompanied by work in the drafting-room on the design of locomotive parts and auxiliaries and work on the road testing locomotives.

41. **Structural Engineering III.** Graduate year, spring term. Design and construction of dams, retaining walls, warehouses, and other structures. Special stress will be laid on plain and reinforced concrete and masonry design. Preparation required, structural engineering II.

42. **Contracts and Specifications.** Graduate year, spring term. In this course the students are required to draw up contracts and specifications for various engineering works, using as models forms that have been secured from leading engineering firms. One or more lectures on business law will be given in this course.

43. **Seminar.** Graduate year, spring term. Each student is assigned a subject on which he is to prepare an article to be presented before the class on a certain date. He is expected to be able to answer questions that may arise in the course of the discussion, and to be able to defend his statements. The grade in the subject depends not alone upon the subject-matter, but also upon the manner of presentation and his ability to support any statements made.



MACHINE SHOP.

44. **Steam Engineering C and E.** Winter term. An elementary course in valve-gears, steam-boilers and thermodynamics of the steam-engine. Designed for students in civil and electrical engineering.

45. **Steam Engineering E II.** Graduate year, fall term. A continuation of the work taken up under steam engineering C and E, with particular attention to the thermodynamics of large steam units used in electrical power plants. Taught to students in electrical engineering.

46. **Applied Mechanics A and E.** Third year, winter term. A condensed course in applied mechanics, taking up the subjects of moments, moments of inertia, stresses in columns, beams and girders, an analytical study of roof and bridge trusses, and a short course in strength of materials. Intended for students in electrical engineering and in architecture. Preparation required, integral calculus.

47. **Structural Engineering A.** Graduate year, spring term. A course in the design of engineering structures, based on the previous term's work in applied mechanics. Taught to students in architecture. Preparation required, applied mechanics A.

48. **Greenhouse Construction and Heating.** Graduate year, fall term. A course taught to students in the horticultural course, and dealing with the design and construction of greenhouses and with the layout, installation and operation of heating plants for the same.

49. **Farm Motors.** Fourth year, fall term. This course is designed for students in agronomy, animal husbandry and printing, and deals with the construction and operation of various farm motors, such as gasoline- and steam-engines in the stationary, portable and traction types, with hydraulic motors and rams, and with the transmission of power. In connection with the classroom work there is a course in the laboratories, in which the students are instructed in the operation of the various motors and receive practice in installing the same. Incidental to the installation, a certain amount of instruction and practice in the use of concrete is given.

Thesis. Fourth year, spring term. A thesis dealing with some subject closely related to mechanical engineering is required of each graduate of this course. The work is done under the supervision of one of the instructors of the department, but the student is required to lay out his own scheme for the work, and oftentimes to design, construct and calibrate the apparatus to be used. Upon completion of the graduate year a second thesis is required, which may be on an entirely different subject than that of the first thesis, or may be a continuation of the same.

EQUIPMENT.

The shops of the Kansas State Agricultural College are furnished with the best modern machinery and tools for working both wood and iron, and are in operation six days per week throughout the year.

Wood Shop.—This wood-working room is 40 x 66 feet, contains 220 separate kits of tools, and benches for forty-four students in each class.

Pattern Shop.—This room is 40 x 100 feet, contains twenty wood lathes fully equipped with tools and chucks, wood planer, friezer, band-saw, jig-saw, circular saw, power mortiser, sand-papering machine, eight pattern-makers' benches, drills, grindstones, and a tool-room with complete equipment of small tools.

Machine Shop.—This room is 40 x 80 feet, contains twelve fourteen-inch engine-lathes, one twenty-eight-inch by twenty-foot engine-lathe equipped with blocks to raise it to sixty-inch swing, one sixteen-inch combination engine- and turret-lathe, speed-lathe, Gray planer, Hendey-Norton shaper, Brown & Sharpe No. 2 universal milling-machine, Walker universal grinder, special drill-grinder, key-seater, bolt-cutter, pipe-machine, vertical drills, fifty-one-inch vertical turning-and-boring mill, benches and tools for fifty students, and a completely stocked tool-room, equipped with the finest modern tools.

Blacksmith Shop.—This room is 40 x 50 feet, equipped with twenty-four forges fitted with power exhaust. Each forge has anvil and complete set of smithing tools. In addition to the general tools for a fully equipped blacksmith shop, there are also installed here a drill-press, punch and shear, emery-grinders, cold saws, and a number of pieces of special apparatus built by the department.

Iron Foundry.—This room is 40 x 50 feet, equipped with a two-ton cupola, a one-and-one-half-ton steel crane, core oven, an exceptionally large number of flasks, both wood and iron, ladles, etc. The foundry makes all castings for machine building, together with boiler fronts, grate-bars, and special repair work.

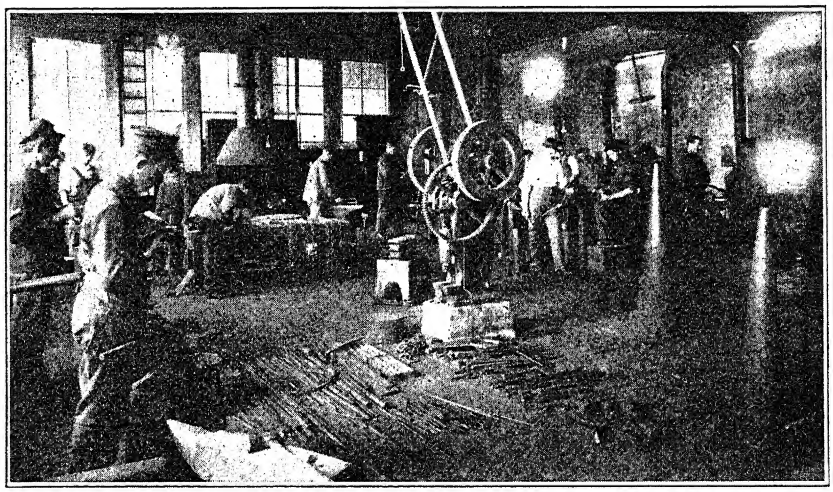
Brass Foundry.—This room is 16 x 30 feet, with furnace, crucibles, flasks, and a complete equipment for bench and floor molding. The product consists of bearings, friction metal, valves, fittings, etc.

Engineering Laboratory.—This room is 35 x 40 feet, and contains a great variety of apparatus, among which may be specified a 100-000-pound testing-machine, both automatic and autographic; an eight-horse-power vertical steam-engine; an eight-by-eight Ingersoll-Sargent air-compressor; a six-horse-power Sturtevant engine, used as an air-motor; a ten-horse-power Witte gasoline-engine; a six-horse-power Dempster gasoline-engine; complete cement-testing outfit; absorption, transmission and traction dynamometers; steam- and gas-engine indicators, gage-testing apparatus, and a variety of special machines for the testing of material; also, thermometers, calorimeters, speed indicators, etc. The very complete boiler- and engine-rooms adjoining the laboratory afford special opportunities for the work relating to steam engineering. Yards and sheds have been provided for carrying on tests that cannot be made in the laboratory. The department has a twenty-horse-power traction-engine that is fitted up to run boiler, engine and traction tests. There has been installed a Miles concrete-block machine. The cement blocks

made in this machine will be tested under various conditions of mixtures, age, etc. Tests will also be made to determine the effects of fire on building blocks.

Power Plant.—The boiler-room contains five sixty-horse-power horizontal return-flue boilers, three 100-horse-power boilers, pumps, steam-traps, etc. These boilers are used for the generation of steam, for both power and heating purposes, and are independently connected, that they may be tested individually or in groups. The engine-room is equipped with a 100-horse-power medium-speed engine, directly connected to a 60 k. w. multipolar generator, with marble switchboard and complete apparatus; one fifty-horse-power Ball & Wood engine, belted to bipolar generator, with switchboard; one ten-horse-power Atlas engine; one five-horse-power generator, built in the shop, for testing purposes; one Shipman coal-oil engine and several small dynamos for testing purposes. In connection with the power plant is a very complete rope-driven installation, especially designed for the department.

Drawing-rooms.—On the second floor of the wood-working department are found the drafting-rooms, recitation- and lecture-rooms, photographic and blue-printing rooms, and a paint and varnish room.



BLACKSMITH SHOP.

MILITARY TRAINING.

This institution being one of the beneficiaries of the act of Congress of 1862, instruction in military tactics is made compulsory. The course of instruction is made to conform strictly to the provisions of General Orders No. 101, War Department, 1905.

In compliance with the requirements of that order, the course will be both practical and theoretical, and applied as follows:

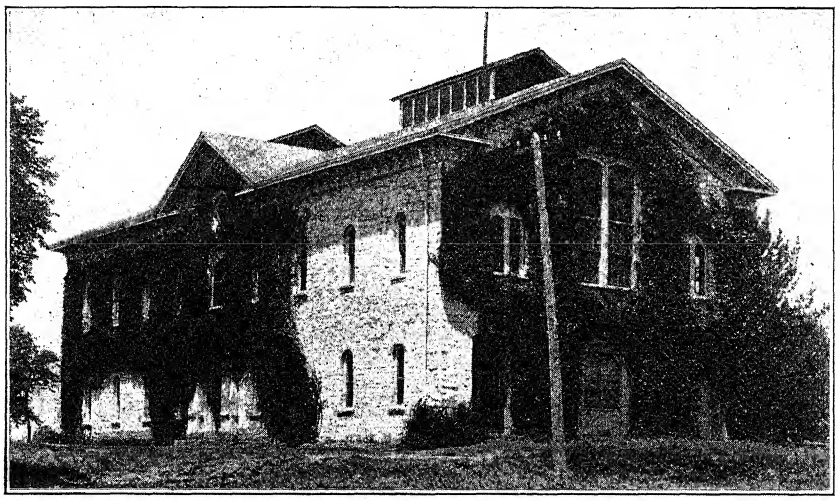
a.—Practical.

1.—Infantry drill regulations, through the school of the battalion, in close and extended order.
2.—Advance- and rear-guards and outposts.
3.—Marches.
4.—The ceremonies of battalion review, inspection, parades, and guard-mounting.
5.—Infantry target practice.
6.—Instruction on first aid to the injured.

b.—Theoretical.

1.—The infantry drill regulations, covered by the practical instruction.
2.—The manual of guard duty.
3.—Small-arms firing regulations.
4.—Field-service regulations.
5.—The Articles of War, with specific reference to articles 4, 8, 15, 20, 21, 22, 23, 24, 32, 38, 39, 40, 42, 44, 46, 47, 50, 55, 57, 61 and 65.
6.—Lectures.

The national government has supplied the College with 395 cadet rifles and an equal number of sets of infantry accouterments; also two three-inch field-guns and carriages. Swords, target supplies and annual issues of ball and blank cartridges are also received from the general government.



ARMORY.

Organization. Cadets are organized into a battalion of infantry and a band, the drill and administration of which shall conform to that of the United States army. Officers and non-commissioned officers are selected by the professor of military science and tactics, with the approval of the President, according to the principles governing such selection at the United States Military Academy, and receive commissions and warrants from the President of the College.

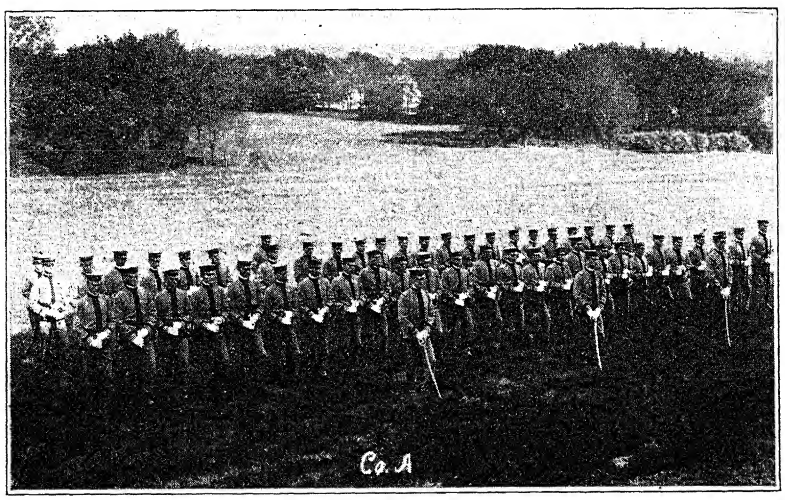
Discipline. Each cadet is furnished with a copy of the cadet regulations governing the military department, approved by the Board of Regents, and is required to familiarize himself with them and to conform strictly to their requirements.

Band. Assignments to the band are made by the professor of music, who is charged with the technical instruction. Practice in the band is accredited, through the military department, in lieu of drill and theoretical instruction, subject to the provisions of the cadet regulations, with which strict conformity is required.

The purpose of the cadet band is to foster and encourage among the cadets a love for patriotic national airs and martial music.

Requirements. All young men are required satisfactorily to complete six terms' work before graduation, unless excused for physical disability. Drill periods scheduled in the course of study refer to full hours of sixty minutes each. Additional work is optional with juniors and seniors, who are given preference for appointment as officers. A junior or senior having enrolled optionally and accepted a commission is required to continue the work throughout the College year, subject to the same regulations as other cadets.

Uniform. The uniform conforms to the West Point cadet pattern. Blouse must be of good quality cadet-gray cloth, trimmed with best quality black mohair braid one inch wide, collar not less than one and one-half inches high, with half-inch gilt metal letters K. S. A. C.; insignia of rank to conform to that of the United States infantry; trousers, good



COLLEGE CADETS.

quality cadet-gray doeskin, with black cloth stripe of army regulation width to denote rank; cap, West Point cadet pattern, with College emblem.

Trimmings of band uniforms are modified as authorized for bands in the United States army.

The commandant of cadets furnishes specifications to all authorized dealers in uniforms, and uniforms must conform to such specifications.

All military students are required to provide themselves with uniforms within two weeks after assignment. The uniform can be purchased at a reasonable price, after enrolment, and makes a good serviceable suit for regular College wear.

Text-books. Each military student will be required to provide himself with the following text-books: United States Drill Regulations (latest edition), The Manual of Guard Duty (latest edition), Small-arms Firing Regulations (latest edition), Field-service Regulations.

The instruction in keeping records will be from blank books provided by the War Department.

War Department Record. At the close of the year the names of the three cadets most distinguished in military science and tactics are reported to the War Department for insertion in the United States army register, and also to the adjutant-general of the state.

MUSIC.

Recognizing the importance of music in our daily life, its power, culture, inspiration, comfort, and the necessity of musical knowledge for those who aim at the profession of teaching, this College offers to the earnest student a good opportunity for the study of music.

No regular course is given. The student may take music for one term only, or for an extended period of five years. Instruction is furnished free to all regular students assigned to music in the following branches: Voice, piano, violin, wind and brass instruments; notation, theory, harmony and musical history.

ALL CLASS INSTRUCTION. Class organization shall be wholly under the control of the professor of music. Classes will be organized at such periods as will best accommodate the students interested.

Voice. In developing the voice, the laws of nature must be strictly followed, and only through the most conscientious study will the true voice, with its volume, resonance, intensity, purity and flexibility be obtained. Texts: First and second years, teachers' exercises, Concone's fifty exercises, sacred and secular songs, solo, quartette and chorus singing; third, fourth and fifth years, exercises by Bordese, Lamperti, Marchesi, Nava, Panofka, Panseron, Rubini, Savinelli, and others; songs by Shubert, Brahms, Schumann, and other great masters; oratorio and operatic arias.

Piano. In the study of this instrument, which occupies a place of so much dignity and importance in every musical education, great attention is given to every detail of technique and to the development of a correct touch, which is so necessary in giving expression to musical thought and feeling. It includes position of fingers, hands, wrists and arms, properties of touch, thorough drill in scale and arpeggio playing, and exercises in accent, rhythm and expression. The curriculum is chosen from the works of the standard composers, not omitting modern European and American writers who best represent the modern spirit and progress. The following outline of a course of study, made with reference to the musical value of the selections, as well as to the special

necessities of the pupils, may be followed or varied by the professor in charge: Text, Zwintcher's Exhaustive Book of Daily Studies. Czerny, Kohler, Duvernoy, Melodic Studies by Heller, Sonatinas by Kuhlau and Clementi. Selections from Bach, Handel, Mozart, Haydn, Beethoven, Mendelssohn, and modern composers.

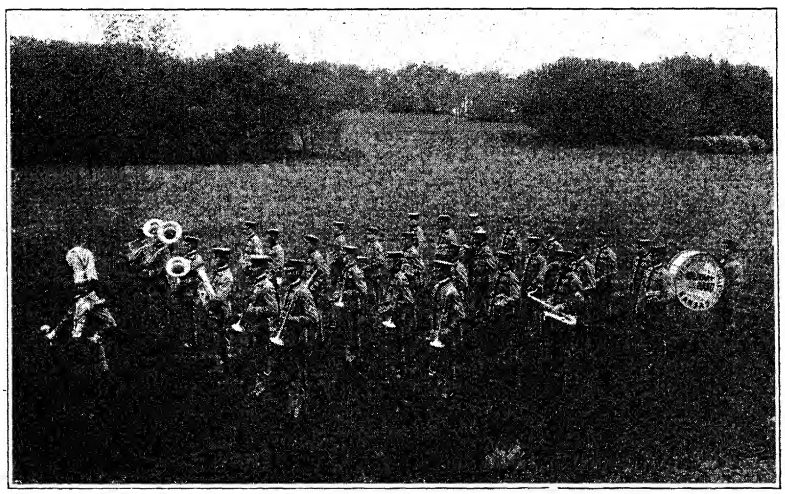
Violin. Instruction is based upon the best schools for the instrument, particular attention being given to correct position, intonation and bowing. Advanced students have the further advantage of playing in the College orchestra. Text, selections from the following works or their equivalents: Methods by Wichtl, Henning, Dancla, and De Beriot; exercises by Dancla, Pleyel, Kayser, Mazas, Schradieck, David; etudes by Kreutzer, Rode; solos by De Beriot, Leonard, Singelee, Alard, David, Vieuxtemp, and modern composers.

Musical Organizations. Each instrument has a distinct function in the science of tonal expression, and only in their combination are the finest effects in the coloring of the melody, harmony and rhythm procured. This combination is made possible in the musical department by the number of pupils and the variety of instruments studied. Students who are sufficiently advanced to join the College choral union, College glee club, College orchestra or the military band, may become members by assignment.

Choral Union. Chorus singing is of great importance to the vocal students, and for their benefit was this society organized. Two rehearsals are held each week, regular attendance being required.

Chapel Chorus. The most advanced pupils are requested to sing in this chorus, which furnishes music for chapel exercises. A splendid opportunity is here given to learn the art of directing. One rehearsal a week.

College Orchestra meets daily, and furnishes a valuable opportunity for study and practice in orchestra playing and for those who wish to study instrumentation. The members become acquainted with the standard works of orchestral composition, and this may best be done only by actual orchestra practice.



CADET BAND.

Military Band furnishes music for battalion formations and ceremonies and for various other College occasions. Membership is limited in number, and is decided by examination. Assignment to band is for entire year, and requires regular attendance until after commencement exercises.

Uniforms.—(See description under "Military Training.")

Public Exercises. Music for commencement week and other public College exercises is furnished by the musical department, under the direction of the professor in charge, and all students in the department shall be subject to his call to assist in furnishing the same.

Annual Concert. An annual concert will be given on the second Thursday in March.

During the spring term a number of musical recitals are given, in which the students furnish the entire program. These are open to the public.

PHILOSOPHY.

To be able to grapple most advantageously with the serious problems of life, one must have an intimate acquaintance with himself. To be able to become a valuable member of society, he must know how to develop and use his mental powers judiciously. Too many people are inclined to regard their mental activities as a sort of fixed inheritance, with little or no possibility of readjustment. It is the aim of this department to interest the student in a more careful study of the mental phases of human life, and to aid him in a more definite and systematic knowledge of the meaning of his own concrete experiences.

The several subjects are offered as follows: No. 1 is required in all courses; No. 2, in the printing, general science and domestic science and art courses; No. 3, in the agronomy, animal husbandry, dairying, horticulture, poultry husbandry, printing and general science courses.

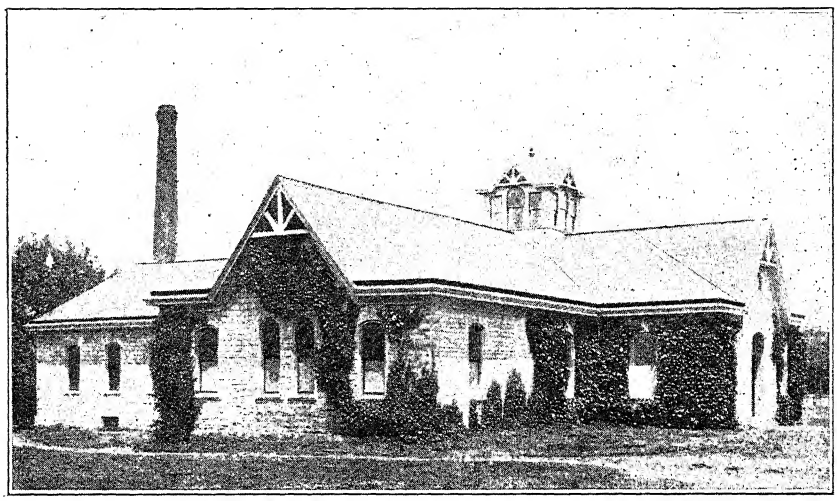
1. **Elementary Psychology.** This course is intended to give the student (*a*) a general idea of the meaning of psychology, and (*b*) a better method of expending his time and energies in the pursuit of college work. Not less than ten lectures will be given, as follows: (1) Neural basis of mind, (2) perception, (3) imagination, (4) memory, (5) habit, (6) thinking, (7) the emotions, (8) the will, (9) self-confidence, (10) methods of study and work. Text, Psychology and Higher Life.

2. **Psychology.** An effort is made to master the general principles of the subject, the various mental processes being analyzed and explained. Some attention is also given to theories of right and wrong and correct principles of action. Considerable time is given to the discussion of mental poise, self-control, emotional expression, the influence of the mind on the body, and the like. Special effort is made to enable the student to get the psychologic point of view, to the end that he may obtain a better understanding of himself and of human nature in general. He will then think of others in terms of mental conduct rather than in terms of physical conduct; and, having been made more fully aware of the obstacles that confront every earnest soul, he will become more sympathetic. Finally, as a result of systematic mental discipline, the student may expect to meet with greater success in his chosen vocation. Some simple experiments are performed, and each member of the class is given a topic for special research. Text-book, James.

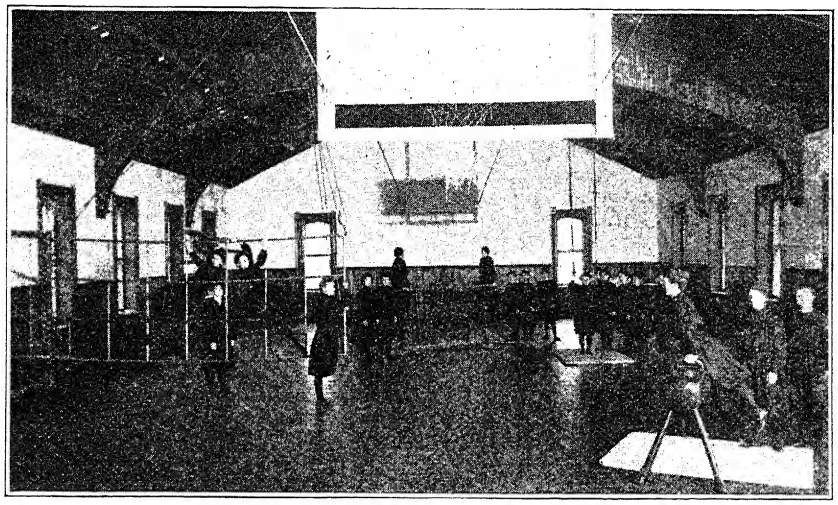
3. **Philosophy.** The work of a student attending a college of agriculture and mechanic arts is, in a sense, somewhat narrowing; that is, he must choose early in his college career a special course of study and devote practically all his attention to it, to the exclusion of many other

subjects and affairs of much value and interest. As a result, the student tends to become conscious of his powers and capabilities in only one line of activity. But it is believed that the young specialist will make greater headway in the realization of his highest aptitudes by means of considering for a short term the broader aspects of human affairs. With a view to attaining the end just stated, this brief course in the introduction to philosophy is offered. There will be made an attempt (1) to enable the student to acquire some knowledge of the historical development of the world of science and of thought; (2) to consider in some detail the meaning of physical phenomena as against mental phenomena; (3) to bring, if possible, the student's seemingly disorganized experiences together into a larger unity that will throw some new light upon the meaning of human life and destiny.

4. **Pedagogy.** It has been found that a considerable number of the graduates of this College become public-school teachers. An act of the legislature grants to such graduates a three-year state certificate, renewable for life, provided they pass an examination in the so-called professional branches. These are given, as follows: History of education and school law, fall term; philosophy of education, winter term; methods and management, spring term.



WOMEN'S GYMNASIUM.



WOMEN'S GYMNASIUM.

PHYSICAL TRAINING.

The maintenance of robust health and a good constitution should be one of the chief aims of every girl. It is impossible to cultivate the body without benefit to the mind; likewise, in order to cultivate the mind properly one should learn to care for the body. With this end in view, a gymnasium for women has been provided. It is well equipped with apparatus, shower-baths, lockers, etc., and a well-regulated system of physical training is in successful operation.

Daily classes are held in light gymnastics—free standing work, marching, fancy steps, drills with dumb-bells, wands, and Indian clubs, with musical accompaniment; heavy gymnastics, including horse, parallel bars, chest weights, flying ring, ladder, stall bars, climbing ropes, and horizontal bar. Gymnastic games, including tennis and basket-ball, are taught to those who care to learn. When the weather permits, exercises are taken in the open air.

All young women of the College have access to the privileges of the gymnasium, and one year's work is required. Before entering upon the work, a physical examination is made by the director. The examination includes measurements of physical proportions and takes note of the condition of the heart and lungs. From this examination an anthropometric chart is platted, showing size, strength, and development, and defects in comparison with the normal standard. Frequent measurements are taken and comparisons made to show effects of training.

A uniform suit has been adopted, which all the girls taking gymnasium work are required to provide themselves with. The suit is black, and consists of a blouse waist and bloomers, and must be made in the uniform style, color, and cloth. The pattern for the suit and sample of cloth may be obtained by sending fifteen cents and bust measure to the secretary of the College. Gymnasium shoes may be purchased at prices ranging from fifty cents to one dollar and thirty-five cents. The entire suit, including shoes, need not cost more than four dollars.

PHYSICS.

Recognizing the need of a thorough knowledge of the fundamental laws and principles involved in all physical changes, it is the intention to provide in the courses which follow both a theoretical and a practical treatment of the subject.

Instruction will be based upon the facts given in selected text-books and these topics enlarged upon by lectures and illustrated by experimental demonstrations. The aim is to give a training in exact reasoning and a knowledge of principles that will be factors in the solution of problems in all branches of science as well as in every-day life.

The laboratory work which accompanies all courses in physics will give the student abundant opportunity to test the principal laws, and, since he will be expected to arrange and operate the apparatus, the work should enable him to acquire skill in manipulation, precision of judgment, and care in the use of delicate instruments.

The laboratories are well arranged for the work, and the equipment provided is of a nature adapted to meet the requirements for accurate work in all courses.

Courses 1 and 2 are required of all students; courses 3, 4 and 5 are required of engineering students; courses 6, 7 and 8 are elective.

1. **Physics I.** Freshman year, fall term. This work is intended to give a general view of the subjects of mechanics and heat. Special emphasis will be placed upon those principles which will be met again in later work in the same or other sciences. Text, Millikan and Gale.

Laboratory.—The importance of accurate measurements, observations and conclusions will be emphasized in the use of such instruments as the calipers, balances, micrometer, spherometer, barometer and thermometers. The measurements taken will be made the basis of problems to illustrate the various laws discussed in the classroom.

2. **Physics II.** Freshman year, winter term. This course is a continuation of the preceding course, and will include a study of electricity, sound and light. Discussions of the most important laws involved in each, together with explanations of many of the every-day phenomena, will be followed by problems. The fundamental laws in electricity will be studied and illustrated and the working principles of many of the electrical appliances in daily use will be made subjects for class discussions. Text, Millikan and Gale.

Laboratory.—Measurements in reflection and refraction, use and construction of cells, simple forms of wiring and use of instruments for measuring current will be made the basis of the work given.

3. **Physics III.** Junior year, fall term. Mechanics. This course is intended to give the engineering students as thorough a working knowledge as possible of the fundamental units and laws involved in force, work, power and energy; also the laws of simple machines, gases and liquids as they occur in the transmission of force and energy. Text, Watson.

Laboratory.—The work will be based upon the use of apparatus to test the laws of inertia, moments of force, moments of torsion, elasticity and rigidity, and other laws and principles involved in mechanics. Accurate measurements and carefully recorded data will be required.

4. **Physics IV.** Junior year, winter term. Light and electricity. The principal phenomena of light, together with the laws that may have a direct bearing upon light as a scientific standard and method of measurement, will be treated in this course. The work in electricity will be of such a nature as to give the student a working knowledge of the units employed and the fundamental laws, and to acquaint him with methods of producing current, its uses, and the system by which electrical energy is measured. Text, Watson.

Laboratory.—This work will consist of experimental tests in which reflection and refraction of light will form the basis of physical measurements. Measurements will be made of electrical resistance, electrolysis, relation of heat and mechanical energy to electrical energy.

5. **Physics V.** Junior year, spring term. Sound and heat. The facts in sound that will involve points of special use and training will be discussed. Heat will be treated both theoretically and practically, and in such a manner that its relation to mechanical energy will be emphasized. The methods of measuring heat energy and the methods of heat transformations and transference will be discussed and illustrated. Text, Watson.

Laboratory.—This course will consist of measurements of velocity of sound in solids and gases, thermometry, calorimetry, expansion of solids, liquids and gases and the mechanical equivalent of heat.

6. **Physics VI.** Fall term. A thorough study of the laws of forces and motion. Composition of forces and velocities by graphic and trigonometric solutions. Nature of sound; its wave motion and velocity; the factors that will change the velocity, and the phenomena produced by its reflection. Thermometry, calorimetry, the laws of radiation and absorption of heat. Text-book, Hastings and Beach.

Laboratory.—The work will be of such nature as to give students an opportunity to make experimental tests of the laws in the subjects discussed in the classroom.

7. **Physics VII.** Winter term. Electricity, magnetism, and light. This course is intended to give the student a historical review of the development of electricity and magnetism. The methods of measuring current and resistance will be discussed and illustrated. The solution of problems involving the laws derived in the classroom is required. Nature of light; laws of reflection and refraction. Construction of images in plane, concave and convex mirrors. Diffraction and interference. Text, Hastings and Beach.

Laboratory.—This work will include measurement of resistance, current, and potential; electrolysis, magnifying power of lenses, focal lengths, photometry, etc.

8. **Physics VIII.** Spring term. A course in which the principles discussed will be those arising in meteorology. It will be the purpose in this course, by use of text-book and lecture, to study the fundamental principles that govern weather changes and conditions, and the use of instruments for recording the data taken, in preserving weather records, and in making up the daily weather forecasts. Courses 6 and 7, or their equivalents, will be required. Text, Davis.

Laboratory.—Experiments in relative humidity, vapor pressure and sensitive thermometers will be given, and the use and care of the weather instruments will constitute the work of this course.

POULTRY HUSBANDRY.

For the first time at this institution, regular work is offered in poultry husbandry to those who care to give special attention to this rapidly growing and most important branch of agriculture. This course is not designed as a distinct course in poultry culture, but to supplement a good general agricultural course during the fourth and fifth years, with special work along the lines of poultry husbandry.

1. **Poultry.** (Elementary course.) Third year, spring term. This is a general course in poultry husbandry, required of all students taking agriculture, consisting of lectures and recitations on breeds of poultry, judging poultry, poultry feeds and feeding, poultry buildings, and general poultry management.

Laboratory.—Practice in judging; planning and making drawings of poultry plants; practice in judging poultry; studying poultry feeds; the structure of the egg; planning yards and poultry-houses.

2. **Poultry Husbandry I.** Fourth year, fall term. Lectures on the origin and classification of poultry breeds, breeding and feeding, considered from the standpoint of the farmer, the specialist and the fancier.

Laboratory.—Practice in individual judging of poultry; caponizing; planning and drawing buildings and yards adapted to the needs of the farmer, the specialist and the fancier.

3. **Poultry Husbandry II.** Fourth year, winter term. Lectures and recitations on incubators, incubation, brooders, brooding, marketing poultry, feeding chickens for growth, for flesh, for fattening, and for eggs.

Laboratory.—Feeding and keeping records of pens of fowls; practice in operating and caring for incubators and brooders.

4. **Poultry Husbandry III.** Fourth year, spring term. Lectures on specialized poultry culture; preparing for market and marketing broilers, roasters and eggs. Lectures on poultry diseases, their causes, prevention and treatment; also lectures on parasites and their control.

Laboratory.—Practice in preparing broilers, squabs, chickens and fowls for market. Making plans and drawings of poultry-houses, illustrating proper methods of construction to provide for ventilation, light and sanitation.

In addition to the regular work as outlined above, provision is made for advanced and special courses in poultry culture.

PREPARATORY DEPARTMENT.

Inasmuch as many students seek admission to the College with inadequate preparation in one or more of the subjects required for entrance, it has been found necessary to establish a preparatory department, in which such deficiencies can be remedied. Instruction is given in all studies required for admission to the College. See "Terms of Admission."

1. **Arithmetic.** Instruction is given in the principles that underlie the various classes of problems, thus teaching the student to rely upon himself, not upon rules. Text, state book.

2. **Algebra I.** This includes the fundamental operations, factoring, highest common divisor, lowest common multiple, and fractions. Text, Wells's New Higher Algebra.

3. **Algebra II.** Simple equations, involution, evolution, theory of exponents, and radicals as far as the subject of quadratic equations.

4. **Algebra III.** Quadratic equations, ratio and proportion, arithmetical and geometrical progressions.

5. **Bookkeeping.** This is not an extended course, but sufficient instruction is given to enable the individual to open and close accounts in ordinary business transactions. State text-book.

6. **English Grammar.** The aim is to lay a good foundation for the further study of English. Recognizing the fact that grammatical drill develops in students logical habits of thought, besides giving them greater command of language, special attention is given to the analysis and construction of sentences and to the principles of elementary composition. Two classes are formed each term, the B class completing the work in two terms; the A class in one term. Text, Longmans.

7. **Advanced Grammar.** One term. A review of the principles of grammar as preliminary to the College requirements in English. Practice in grammatical analysis of difficult sentences and of extended passages of literature. Also a study of the etymology of derivative words, of synonyms, of the uses of words, and of the principles of sentence structure, with practical exercises in word analysis. Text, Longmans.

8. **English Readings.** As a prerequisite to admission to the College classes in English, a careful study is made of a number of standard productions of first-class interest and easy style. Sketches of authors, both oral and written, character sketches, abstracts, outlines and analyses of every production are required. As these productions are mostly read and discussed in class, opportunity is afforded for considerable valuable training in pronunciation and effective reading.

List of Readings.—Coleridge's Rime of the Ancient Mariner; Tennyson's Idylls of the King; Webster's Bunker Hill Orations; Arnold's Sohrab and Rustum; Irving's Sketch Book; Shakspere's Julius Cæsar; Dickens's Tale of Two Cities.

9. **English Composition.** One term. The work is based on Smith and Thomas's Composition and Rhetoric. The text is completed to chapter XIII, with the addition of chapter XIX and the appendix, special attention being given to the study of usage and diction. The object of the work of this term is to give the student a knowledge of the elementary principles of composition, to improve his vocabulary, and to help him overcome the fear of expressing himself in writing. To this end he is encouraged to choose subjects that spring from his own experience or observation, and is required to present one theme each week, which, after being read before the class, receives corrections from the instructor in charge.

10. **United States History.** The leading facts, causes and sequences showing the growth of our country and national history are studied with a view to develop true patriotism. Text, McLaughlin.

11. **Ancient History.** This course is introduced by a brief study of Egypt, the Hebrews, and other oriental nations. The history of Greece is followed from its prehistoric conditions to its conquest by Rome, 146 B. C. The Persian and Peloponnesian wars must be studied, but the emphasis is laid rather on the life and government of the people in their city-states, on the age of Pericles, and the art, literature and philosophy of the Greeks. Alexander the Great is studied, not so much for his military achievements, but rather as the disseminator of Greek civilization. The last half of the term is devoted to Roman history. The growth of the nation is followed, from the founding of the city till the great republic surrounded the Mediterranean and embraced practically all of

the known world. The story of the Punic wars is, of course, included. The Romanizing of Europe; the reason for the change from republic to empire, and the method of its accomplishment; Rome's contribution to civilization, such as her roads and her laws; the origin of the Christian church; the Augustan age, and the lasting impression that 500 years of world empire made on mankind, are among the points emphasized. An attempt is made to acquire some familiarity with the great personages, such as Pericles and Cæsar, who played their part in the ancient world. Text, Myers's Ancient History, edition of 1904.

12. **Medieval History.** This course begins with the fall of Rome and the migration of the Teutonic tribes, thus discovering the very beginnings of the present European nationalities and languages. The work of Charlemagne; feudalism; the Christian church and monasticism; Mohammedanism; the achievements of the Northmen; the Hundred Years' war; the crusades; the formation of modern governments; the Italian cities, and the Renaissance, are among the subjects studied. Special emphasis is given to the history of England and the rise and power of the medieval church. Text, Robinson's History of Western Europe, first half.

13. **Modern History.** This course covers the period since 1492. The following are among the subjects emphasized: The Protestant Reformation and the later development in the history of the church; the Thirty Years' war, especially its causes and results; the second great series of wars between England and France, including the French and Indian wars, the American Revolution, and the Napoleonic wars to 1815; the French Revolution; the rise and fall of Spain; the growth of France and recent changes in her government; the creation of the German empire and of modern Italy; the heroic struggle of the Netherlands and the growth of Russia; the last century of European history, the chief facts in the present governments of the European nations, and their present international relations. Text, Robinson's History of Western Europe, second half.

14. **Physiology.** This is elementary work, intended to prepare students for the more advanced work given in second year of the agriculture, domestic science and general science courses. As far as possible, models, skeletons and dissecting material are made use of in the classroom. Walker's Elementary Physiology is used as a text.

15. **Geography.** Because of recent history, special attention is paid to the geography of the United States, its possessions, products, resources, methods of transportation, etc. Text, state book.

16. **Botany I.** The object of the course is to acquaint the young student with the primary essential facts in the life and growth of plants; to enable him to see how plants work and live, and upon what things, in the external world, they depend. As much knowledge of plant structure is required as will render the working processes clear. Practical studies are followed out in such problems as germination and growth, in the uses of the different plant organs, in respiration, transpiration, carbon assimilation, storage and transport of food, building up of tissue, etc. The effects are studied of unfavorable conditions, such as drought, freezing, lack of sunlight, etc. The different ways in which plants increase are examined, and the manner in which they struggle for possession of the soil. In general, in this course, the seed plants are chiefly employed for illustration and experiment, but the other groups are freely drawn upon, and the general way in which the different groups are related to one another is shown in an elementary manner. Text, parts I and III of Principles of Botany, by Bergen and Davis.

17. **Elementary Botany II.** This course covers the elements of morphology, physiology, and ecology. All of the great groups of plants are taken up and discussed in the order of their evolutionary development. Especial attention is given to the changes in structure which appear in response to changes in environment. Emphasis is laid upon the plasticity and adaptiveness of the plant organism. By grasping this fundamental conception at the outset, the facts of plant life, particularly studied in horticulture and agriculture, become more comprehensive and significant. A general study of the classification of the plant kingdom, sufficient to enable the student to understand the broad outlines and the relationships of the great alliances secured in this course, and, by coming into close contact with plants as living organisms in their natural habitats, he becomes acquainted with the factors that regulate their life and activity. Coulter's Text-book of Botany is used.

Laboratory.—This course is designed to give the student a practical and personal knowledge of both the gross and microscopical morphology of the great groups of plants as studied in the classroom. This is done in order that he may see with his own eyes the relation of form to function, the progressive development in complexity and specialization of organs as he proceeds from the lower to the higher groups of plants, and to train his mind and eye in correct and careful observation. Each student will therefore dissect, draw and describe representative plants from the principal classes of the plant kingdom. Use will be made of a complete equipment of dissecting and compound microscopes and other necessary dissecting tools. The materials called for are a drawing tablet, a hard pencil and a simple hand lens.

18. **Other Branches of Study.** Instruction is also given in spelling, reading, and writing.

PRINTING.

"The art of printing touches every phase of human endeavor." The printer comes in contact with persons in every walk of life. To be capable he must not only know the rudiments of the mechanical side of the art, but must be well versed in English, science, and biologic subjects. He must study the local conditions of the community in which he lives, must reason national affairs, must be able to write upon and discuss all subjects of public interest, and do it fairly and without prejudice; in fact, should be a "molder of public opinion." The printing-office is a schoolroom, and the modern printer and up-to-date editor should be capable of teaching those in his employ—those working under him. He should also be an artist. The mere mechanical tool in a printing-office is of little value to his employer and of no benefit to the community. Regarding printing a prominent state officer once said: "Printing, 'the art of arts preservative,' the art that has done more to civilize and Christianize the world than all else combined." Hebe Wells defines a printer as follows: "A sticker of type, a spreader of ink, a master of press, a man who can think."

In the printing course is taught not only the every-day work of an office, but it includes English, history, public speaking, chemistry, psychology and economics. The student is given laboratory work in carpentry and machine-shops, that he may the better care for and handle the machines under his care and be able to do much of his own repairing. He is taught to handle gasoline-engines and electric motors.

In the printing course practical instruction is given in all the work of a printing-office. The intent of the course is to fit a person to successfully manage a country printing-office, including the editing and all the mechanical work. Practical instruction is given in all lines. The variety of work handled in the College printing department gives a wide

range for instruction and practice. Straight composition, distribution and correcting proofs are first taken up, and punctuation is taught while the student is having his practice work at the case, thus giving opportunity to apply the classroom instruction in punctuation. One term of reportorial work is given during the second year of the course.

During the junior year a second term is given in reportorial work and one term in editorial writing. Editing copy follows, with two terms of proof-reading. In the composing-room, ad. and job composition and distribution, make-up and imposition and job lock-up are taken up. This is followed with estimating jobs, and work in the press-room, at cutting stock and running the job-presses.

Further instruction on the job-presses is given during the senior year, together with trimming and tabbing, the study of methods and management, quality, sizes and weights of paper, and the care of rollers. Two terms of sixteen hours per week each are given to cylinder-press work.

The graduate year treats on tabular work, color composition and press-work, advanced editorial work and ad. writing, besides giving much time to specialize in any branch of the art. Those showing sufficient proficiency will be allowed to take up the technical work of the graduate year during the first years of the course, but no special degree will be issued until all the work of the year is completed.

The College operates a well-equipped printing-office, consisting of 36 cases of six-, eight- and ten-point body type; 150 fonts of job-type, all in series and in cabinets; imposing-stones, etc.; a Babcock Optimus double-revolution cylinder, two Chandler & Price Gordons, a Monitor stitching-machine, a Rosback perforator, and a punching and round-cornering machine. Individual electric motors are used, and students are expected to take care of machines and motors and make slight repairs. Instruction in this line is included in the course, and is taught in the engineering departments.

It is not expected that at graduation a student will be an expert in any line, but he will have a broad foundation upon which to build, and will be far better able to cope with the problems of life than would be possible otherwise. The course leads to the degree of bachelor of science, and when the graduate goes out with a well-balanced education and a technical training such as he shall have received he will find little difficulty in reaching the height of his ambition if he follows the motto of our state, "To the Stars Through Difficulties."

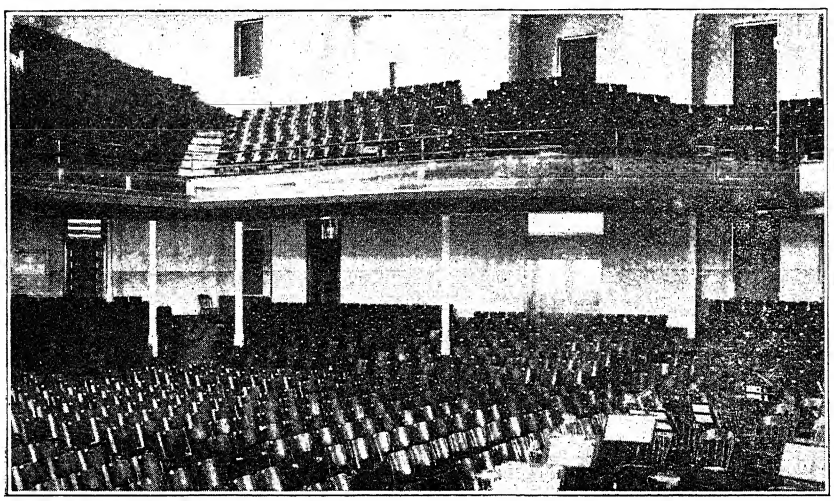
PUBLIC SPEAKING.

There is perhaps no study of wider application and of more immediate benefit to the student than that of vocal expression. It helps him in his other studies. Every recitation affords him an opportunity of practically applying the rules and principles of correct expression, and, what is of still greater value to him, he soon discovers for himself the fundamental principle that proper expression is always the result of a thorough comprehension of the thought. Shallowness and inaccuracy are almost wholly due to defective reading. For this reason, students are encouraged to form the habit of mentally paraphrasing whatever they read, to the end that they may grasp every detail, relationship, contrast and purpose contained in the subject-matter. This habit, when formed, leads to accuracy of scholarship in any line.

It is not intended that this department should afford an extended course in elocution. There is no intention of fitting students for the stage or platform as professional readers. It may be safely affirmed, however, that the course here offered, taken in conjunction with correlated subjects in the department of English, will prepare the student in this line for all the ordinary demands of an active and useful career.

1. **Public Speaking I.** Five hours per week. Required in the second year of all courses excepting the veterinary, domestic science and art and general science courses, where it is given in the third year. In this course the first half of the term is devoted to a study of the fundamental principles of vocal expression, tone qualities, pitch, inflection, force, time, grouping, transition, climax, etc. Exercises in pronunciation, articulation, and breathing. This is followed after mid-term by platform work before the class. Each student is required to make a vocal interpretation of as many selections from literature as the size of the class will permit. He is expected to apply the principles of expression previously studied and learned, subject to the criticism of the instructor and the class. Exercises in extemporaneous speaking and in the delivery of original productions are also given. So far as fundamentals are concerned, instruction is based on Chamberlain and Clark's Vocal Expression and Literary Interpretation.

2. **Public Speaking II.** Five hours per week. Required in the second year of the course in printing, and in the graduate year of the following courses: Agronomy, animal husbandry, dairying and horticulture. Elective in others. The work in this course is an amplification of public speaking I. Selected orations of note are studied as models, critically analyzed and interpreted. Most of the time is devoted to platform work and to the delivery of original productions prepared for assumed occasions such as are likely to arise in the student's life subsequent to his college career.



AUDITORIUM.

VETERINARY SCIENCE.

The course in veterinary science is designed to prepare the student for a professional career and thoroughly equip him for the work. The general studies included in the course all intend to broaden his ideas, the better to fit him for his duties as a citizen, giving him the opportunity of raising himself in the social life equal in standing to that of the human physician. The agriculture students receive a special course of training in the line of practical nursing, hygiene, the use of domestic remedies, and a general knowledge of the diseases of animals and how they can be prevented.

ANATOMY.

A very thorough and accurate knowledge of anatomy is absolutely essential to every veterinary student, for here he learns one of nature's machines with which he is to work, and every intricate part of it must be thoroughly understood.

Experience teaches that when this subject is well mastered it economizes the subsequent efforts of the student and renders the work dependent upon it clear and easily understood, thus giving the student time to energize in other directions, and, best of all, to think and reason for himself, instead of memorizing.

An entirely new method of anatomical instruction was inaugurated last year, hitherto untried in any school of human or veterinary medicine, and its success was so marked it will become a permanent feature. Instead of following the old custom of starting with the easiest bone—the scapula in veterinary and the femur in human medicine—and then studying all the bones, all the ligaments, all the muscles, followed successively by all the vessels and all the nerves, this department follows the zoölogical basis, and anatomy I and dissection I take up the bones of the trunk; that is to say, the vertebræ, ribs, sternum and pelvis. No additional bones are taken up at this time, thus giving no opportunity for the monotony of "dry bones" to discourage and decrease the interest of the students. The ligaments which hold these bones together are next taken up, and

VETERINARY HOSPITAL.

this followed immediately by the muscles of the trunk which enclose the abdominal and thoracic cavities. The student is now ready to fill in and properly locate and thoroughly study the important organs in these two cavities. This is immediately followed by the blood supply to nourish these organs, and this by the nerve supply controlling them, including the spinal cord; the vessels and nerves being carried to their point of exit from the trunk.

It is frequently found that the ordinary high-school physiology has compelled the pupil to make a mental picture of certain structures he never saw, and unfortunately the picture is often wrong. After the completion of anatomy I the student has actually seen and dissected every essential organ in its gross features as well as those bordering on the microscopic, and is now thoroughly prepared for histology, after which he is ready for the physiology, or the functions of those organs and the minute cells that compose them.

The limbs, whose main function is locomotion, and the head and neck, are usually in need of surgical rather than medicinal interference, therefore require an extremely accurate knowledge of the parts, and when brought closer in time to the study of surgery its practical application clinches the essential facts for all time.

The text will be systematic outlines and McFadyean's Osteology and Anatomy of the Horse. Strangeway, Chauveau, Share-Jones and Leisering are used as reference-books. By mutual consent, the dissection by one class occurs every morning from seven A. M. to half-past eight, thus giving opportunity to higher classmen who desire to specialize in anatomy a chance to review and to demonstrate by working with and valuably assisting the under-classmen.

Before actually dissecting the ligaments and muscles of any part the student is required to study them upon a mounted skeleton, thus ascertaining the exact points at which they attach to the bones. The student then goes over the same muscles on the Azoux model, afterwards dissecting with advance knowledge and proving the facts learned. A perfect picture is thus acquired.

The dissecting-room is located in the basement of the new veterinary building, and possesses the best of sanitary and other equipment. Special dissections, quizzes, recitations, and an Azoux model of the horse, costing $900, are used in the classroom. Mounted skeletons and loose bones are abundant in the museum.

Anatomy I is given the fall term of the second year, and consists of supplementary lectures, demonstrations and quizzes upon the bones, ligaments, muscles, splanchnology, angiology and neurology of the trunk, including the introductory work to each of these divisions of systematic anatomy.

Dissection I. Fall term, second year. Includes a thorough and satisfactory dissection of all the structures indicated in anatomy I. The student must make at least three complete dissections of the trunk.

Histology I. First term, second year. This course consists of lectures, recitations and illustrations with the lantern of normal tissues. Starting with the cell, epithelial, connective, muscular and nervous tissues, peripheral nerve endings, circulatory and lymphatic systems, mucous membranes and glands, and the digestive tract. Text, Normal Histology, Piersol.

Laboratory.—Each student is furnished with a microscope, and receives a course in microscopy. After this he must prepare material for microscopical examination from all tissues as they are taken up in the recitation. Also, he must make and return drawings of these tissues.

Anatomy II. Every other day during the winter term, second year. Consists of a review of anatomy I and of lectures, demonstrations, and quizzes upon the bones, ligaments, myology, angiology and neurology of either the anterior or posterior limb, the class being divided into two sections. The student is required to pass one perfect examination upon the origins and insertions of all the muscles dissected, and is marked not upon how near perfect, but upon whether it was accomplished in the first, second, third or fourth trial.

Dissection II. Winter term, second year. Consists in a laboratory study of the bones, and a dissection of the ligaments, muscles, vessels and nerves of the fore or hind limb.

Histology II. Second year. This course must be preceded by histology I. It takes up the study of the urinary, reproductive and respiratory organs, skin, central nervous system, eye, ear, and nasal mucous membranes. Text, Normal Histology, Piersol.

Laboratory.—This work is a continuation of the previous term. The student takes the tissues from the normal animal, hardens, embeds, sections, stains and mounts them upon slides, after which he examines them with the microscope and makes drawings. The slides made by the student are retained by him, thus giving him normal tissues to which he can refer in his study of pathology and later in his practice.

Physiology. The instruction in general physiology consists of the consideration of the composition of bones, blood, lymph, and all secretions of the body, with their functions; the functions of tissues and glands, together with their microscopic structure; also the structure and functions of the digestive tract, respiratory tract, and skin. In order that the student may more fully understand the class work, a laboratory course is offered, consisting of two hours a week, in which the student is required to dissect small animals; also study the microscopic structure of all the glands of the body. The laboratory is equipped with skeletons, *papier mache* manikins, and models of the eye, ear, etc.; also with both high- and low-power microscopes for each student. Text-book, Thornton.

Comparative Physiology I. Second term, second year. Must be preceded by anatomy I, chemistry I and physics I and II. This course treats of the physiology of the domestic animals, starting with the study of the blood, heart, blood-vessels, respiration, digestion, liver and pancreas, absorption, ductless glands and internal secretions, skin, urine and nutrition. Text, Manual of Comparative Physiology, F. Smith.

Anatomy III. Every other day, spring term, second year. Deals with the limb not studied in anatomy II.

Dissection III. Spring term, second year. Consists of a dissection of the limb referred to in anatomy III.

Comparative Physiology II. Third term, second year. Must be preceded by comparative physiology I, of which it is a continuation, treating of animal heat, the muscular and nervous systems, the senses, locomotor apparatus, the foot, generation and development, and the chemical constituents of the body. Text, Manual of Veterinary Physiology, F. Smith.

Laboratory.—This course consists of physiological and chemical experiments with the digestive juices, chemical analysis of urine and bile. The student will take up the study of the phenomena associated with the respiratory, muscular, nervous and circulatory systems, and make the graphic records.

Pathology I. Third term, second year. Must be preceded by courses I and II of histology and physiology I. This course treats of general pathology, congenital and acquired diseases, disturbances of nutrition,

circulation and metabolism, retrograde changes and necrotic processes, repair and new formations. Text, Comparative General Pathology, Kitt.

Anatomy IV. Fall term, third year. Deals first with the osteology of the head and neck, followed by the muscles of the head and neck, after which the angiology and then the neurology, including the brain, is considered.

Dissection IV. Fall term, third year. Consists of a very thorough laboratory study of the bones of the head, collectively and individually, special reference being given to the teeth, sinuses, cavities and foramina. The cephalic muscles are then dissected, after which the cephalic vessels and cranial nerves are dissected, together with the brain.

Pathology II. First term, third year. Must be preceded by pathology I. This course consists of lectures, recitations, and illustrations with the lantern of pathological tissues of spleen and lymphoid tissue, digestive and genito-urinary tracts and the circulatory and respiratory systems.

Laboratory.—In this the student must examine with the microscope, and make drawings of, the tissues studied in pathology I and II, from the slides which will be furnished. He must take tissues from all animals upon which *post mortems* are held, harden, embed, section, stain, mount, and make drawings. All such slides are retained by the student.

MATERIA MEDICA.

This includes materia medica proper, pharmacy and therapeutics; materia medica and pharmacy extending through the junior year, with therapeutics in the winter-term graduate. The student is taught the physical and chemical characteristics of drugs, their physiological and therapeutic actions. The course is both practical and theoretical, preparing the student to use the therapeutic measures at his command in a rational manner. The actions of the more important drugs are studied throughout the course in medicine, surgery, and general clinic.

Materia Medica I. Third year, fall term. The student is taught the definitions of the science, the mode of actions of drugs, and their indications. Comparative action of drugs on various animals, doses and the time of administration are thoroughly discussed. Drugs acting on the digestive system; drugs acting on the circulation, blood, heart, and blood-vessels; drugs influencing the brain, spinal cord and nerves, and drugs acting on nerves of special sense; drugs acting on the respiratory organs, the urinary organs, the sexual organs; drugs influencing metabolism and bodily heat; drugs acting on the skin; drugs which destroy micro-organisms and parasites.

The inorganic agents which are more commonly used in medicine are thoroughly studied, including their action upon the different animals, external and internal; the source, character and indications of the drug, the preparation of each, and the dosage. The student becomes familiar with the drug and its action in the hospital, where we have occasion to demonstrate the use of nearly all drugs studied. Must be preceded by comparative physiology II. Text, Winslow.

CLINIC.

The work in this department extends throughout the junior and senior years and during the graduate year. In the general course in clinic special attention is given to the practical application of the knowledge acquired in the various classrooms and laboratories during the first two years. A special line of work is outlined for the students taking the graduate year. The amount of time required daily for the clinic is limited only by the amount of work on hand. During the past year the number of cases averaged something over twenty patients per week. The

patients are treated by the professor in charge, assisted by senior students and others who have shown proficiency in their work. At the daily clinic both medicinal and surgical cases are examined and treated. The clinic is divided into hospital, transient, and out-clinic. At the hospital clinic patients are treated hourly or daily as the case demands, some remaining several days or months, while the transient clinic cases are given treatment and then discharged. The out-clinic consists of the treatment of patients which are unable to be brought to the hospital. Accompanied by one of the professors, the students are conveyed to the patient, taking with them such apparatus, drugs and instruments as are deemed necessary. In this work the student is brought into contact with actual practice.

At the beginning of the course in clinic each student is required to become familiar with the names of all the instruments, appliances, etc., that are used in the treatment of patients.

The student equipment for the clinic consists of white suits, fever thermometer and a few of the more common surgical instruments, the clinic being conducted the same as laboratory work in other departments. Specially designed blank sheets are furnished for this work. When assigned to a patient the number of the case is taken by the student from the hospital register; also the owner's name, his address, the species, age, sex and color of the patient, and the date when the animal arrived. The student next obtains the history of the case from the owner, also the exciting or predisposing causes, previous treatment and symptoms. After the student has completed his examination he makes his diagnosis and prognosis as near as possible. All of the above data are carefully recorded on the assigned sheets. The patient is now brought before the entire class in clinic and a thorough discussion takes place, at which time the prominent symptoms of the disease are brought out, thus making the work a valuable object-lesson. The professor in charge of the case prescribes and administers treatment, assisted by the students assigned to the patient. When treatment is begun a careful record is made by the student of all appliances used, as well as the drugs that are administered, the quantity used, frequency of administration and method employed. This record is made daily for all hospital cases, in order that the development of the disease may be noted from the outset, the record consisting of the day's treatment, the condition of patient as improved or unimproved. In acute cases the record is made hourly if necessary, and the condition of the patient noted before a second dose of medicine is administered. When a patient is discharged from the hospital a record of its condition at that time is made as cured, improved or unimproved. The above records are of value to the student after the completion of his course, enabling him to successfully treat similar cases upon his own responsibility. In addition to the record kept by the student, he is required to consult treatment of all cases entered in the department hospital record. This enables the student to familiarize himself with the treatment of all the patients in the clinic.

Anatomy V. Winter term, third year. Consists of a correlation review of the entire subject, after which a comparative study of other domesticated animals is taken up.

Dissection V. Winter term, third year. Consists in a complete dissection of the horse, preceded by regional and flap dissections of the principal operation areas. Other animals are also dissected.

Materia Medica II. Third year, winter term. This work is a continuation of materia medica I. The time is devoted more especially to the vegetable drugs used in medicine; their source, actions, dosage; alkaloids, tinctures, fluid extracts, solid and powdered extracts; and the indications for these different forms in diseases of the lower animals are thoroughly discussed, and, so far as practicable, demonstrated in the

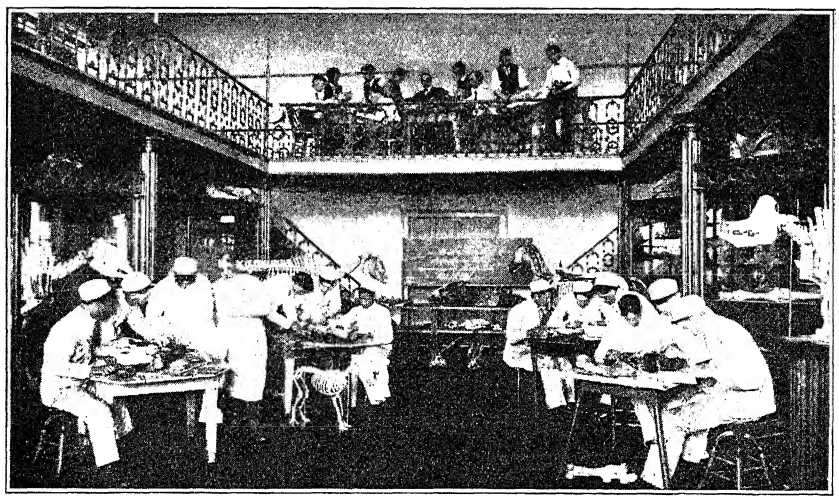
regular clinic. Prescription writing receives attention throughout the whole course in materia medica.

VETERINARY MEDICINE.

The study of medicine extends throughout the last two years of the course and the first two terms of the graduate year, and is taught by lectures and recitations, supplemented by practical demonstrations in the clinic. An exhaustive study is made of Doctor Law's Veterinary Medicine, the five volumes being used as a text. The student familiarizes himself in the daily clinic with nearly all the diseases met in an ordinary practice of veterinary medicine, thereby becoming thoroughly conversant with their causes, symptoms, diagnosis, treatment, and prognosis. A special course in lameness and shoeing is given to seniors. Contagious diseases, parasitism and sanitary science are included, giving the student a thorough knowledge of the practical as well as theoretical phase of the subject.

Each student, before entering the senior year, must be proficient in diagnosing and treating the more common diseases and be able successfully to prepare and administer medicines in all forms. During the year just passed upwards of 500 different cases have been treated in the general clinic, in which the students have had a practical part, many of them treated by the student alone. This work inspires confidence, and the knowledge thus gained is indelibly fixed upon the student's mind.

Medicine I. Third year, winter term. Introducing the student into the study of internal medicine, followed by a comprehensive study of the diseases of the respiratory and circulatory organs, of the blood-vessels and lymphatic system in all domestic animals; special stress being placed upon the various causes, the symptoms, the diagnosis, prognosis, and treatment, and tissue changes of the organs in these diseases.



VETERINARY LABORATORY.

SURGERY.

The veterinary hospital and daily clinics furnish an abundance of material for the course in surgery. Senior students are assigned to the major operations for diagnosis and treatment, under the supervision of the professor in charge. The student is therefore given the opportunity to put into practice the principles acquired in the recitation. This gives him confidence to perform similar operations upon his own responsibility. The junior students are assigned to cases as assistants to the seniors, performing such work as helping in the restraint of animals, preparing fields of operation, and the daily dressing of cases after the operation. The senior performing the operation is given special charge of the case.

A special course in dentistry is offered, owing to the numerous diseases of the teeth in horses. The course is given by lectures and laboratory work in connection with the general surgical clinic. In the lectures special attention is given to the structure of the teeth, their location in the jaws, their growth and replacement, diseases and irregularities of the teeth, and how to treat them. A practical demonstration of the work pursued in the lectures is given in the dental clinic, where each student receives personal instruction in the use of each dental instrument. The surrounding country affords an ample number of cases to illustrate cutting elongations, floating, extraction, repulsion, and trephining. Before passing the subject each student is required to become reasonably proficient in all the ordinary dental operations.

Surgery I. Third year, winter term. The course in surgery is given by recitations and hospital work. In the beginning; the students are given a preliminary course on surgical restraint (the means of controlling animals), the use of anesthetics, antiseptics, etc., general principles in healing wounds, controlling hemorrhages, administration of medicines, bandaging, massage, etc.

Medicine II. Third year, spring term. During this term the diseases of the digestive organs in all the domestic animals are studied. This also includes the diseases of the liver, pancreas, and spleen. Special stress is laid upon the different forms of indigestion, colics, their causes, differential diagnoses, and treatment.

Surgery II. Third year, spring term. This course considers minutely the causes, symptoms, prognosis and treatment of the surgical diseases of the head, nose, nostrils, salivary glands, face and lower jaw, ear and guttural pouches, skull, neck, larynx and trachea, thorax, abdomen; surgical diseases of the stomach and bowels, urinary organs, posterior portions of the rectum and anus, male and female organs of generation. Text-book, Möller.

Pharmacy Laboratory. Third year, spring term. In the laboratory course of pharmacy the student is given a thorough drill in the pharmaceutical processes, the different official preparations and methods of preparing them, the non-official preparations which are used in veterinary practice. The incompatibility of drugs, chemically, physically, and physiologically, are demonstrated in the laboratory and hospital. A thorough drill in prescription writing, measures and weights is given, and the preparation of the tinctures, fluid extracts and powdered extracts of those drugs most commonly used in veterinary practice receives considerable attention. The student is required to compound prescriptions used in the College practice, make boluses, blisters, liniments, etc., and has a thorough course in the identification of drugs in their different forms.

Medicine III. Fourth year, fall term. A thorough discussion of the diseases of the urinary and generative organs, skin, eye, and nervous systems, also constitutional diseases, occupies the attention of the student in this session.

Surgery III. Fourth year, fall term. This course is a continuation of surgery II, and includes a complete study of the surgical diseases of the spinal column and pelvis, the fore and hind limb. Text-book, Möller.

Physical Diagnosis. Senior year, fall term. This course is given special prominence in order to familiarize the student with the normal location and action of those organs most subject to disease. The student here becomes so thoroughly familiar with normal conditions that he can at an instant recognize any deviation therefrom and at once locate the trouble causing certain symptoms.

Medicine IV. Fourth year, winter term. A continuation of medicine III, with a review of medicine I and II, and including parasitism.

Surgery IV. Fourth year, winter term. This course is devoted to the subject of lameness and horseshoeing, and specially considers the following subjects: The horse's foot in relation to shoeing, the structure and functions of the foot, and the shoeing of diseased feet and of lame horses. Text-book, Dollar's Handbook of Horseshoeing.

Infectious Diseases. Fourth year, spring term. This includes the infectious diseases, sanitary science, and police. A thorough drill is given in the more common infectious diseases: Tuberculosis, Texas fever, glanders, hog-cholera, rabies, contagious abortion, anthrax, influenza, and distemper. The methods of diagnosis, control, and eradication, and the laws governing general and special contagious diseases are dwelt upon minutely.

Medicine V. Fourth year, spring term. The work in this department prepares the student for municipal inspection and general sanitary work. The course considers a general discussion of meat inspection, the food of animals, the inspection of animals before slaughter, method of slaughter, and inspection of slaughtered animals. The normal appearance and differentiation of meat and organs of different animals; abnormal physiological conditions which possess sanitary interest; general pathology of food animals from the standpoint of sanitary police; *post-mortem* alterations of meat; preservation, adulteration, and the effects of different diseases on meats; parasites and parasitism in general as related to sanitary work; a discussion of the laws regulating the inspection of meat and meat-producing animals in the United States as well as foreign countries. Text-book, Ostertag.

Obstetrics. Fourth year, spring term. This course considers fully the obstetrical anatomy, physiology and pathology. All of the physiological functions as well as the diseases and accidents of gestation and parturition are considered. The diseases of the young are thoroughly discussed. Text, Fleming.

Hematology. Fourth year, spring term. In order to understandingly study internal medicine a thorough knowledge of the blood is necessary. In this course the student is given a drill in the different methods of examining normal and diseased blood and the changes which take place therein during different diseases and in the different stages of the same disease. The application of this knowledge has become an essential part of the education of every veterinarian.

Operative Surgery. Fourth and graduate years, spring term. In this course the student gives special attention to the technique of performing the various surgical operations, performed both upon the cadaver and the living subject. The abundance of clinical material in this line insures a thorough training and perfect confidence with the various surgical instruments. Text-book, Williams.

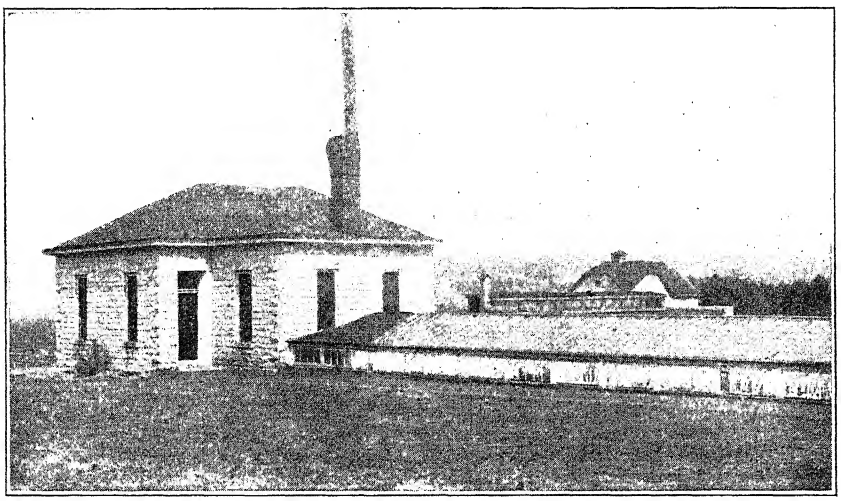
Medicine VI. Graduate year, fall term. During this session a general review of the most important work of the whole subject of medicine is given.

Meat Inspection. Graduate year, winter term. The work in this department prepares the student for the government civil-service examination and general sanitary work. The course considers a general discussion of meat inspection, the food of animals, the inspection of animals before slaughter, methods of slaughter, and inspection of slaughtered animals; the normal appearance and differentiation of meat and organs of different animals; abnormal physiological conditions which possess sanitary interest; general pathology of food animals from the standpoint of sanitary police; *post-mortem* alterations of meat; preservation, adulteration, and the effects of different diseases on meats; parasites and parasitism in general as related to sanitary work. Text, Ostertag.

Sanitary Medicine. Graduate year, winter term. The work in sanitary medicine consists of a discussion and study of the laws regulating the inspection of animals in the United States and foreign countries; the methods of controlling contagious diseases, and laws governing same. A course in veterinary jurisprudence is here taken up and the most important laws pertaining to the veterinary profession are discussed.

Therapeutics. Graduate year, winter term. This is a study of the physiological laws governing the use of drugs used in the practice of medicine. The special indications and contraindications of drugs, their methods of absorption, action, and elimination from the system.

Surgical Anatomy. Graduate year, spring term. This course consists of regional dissections of the structures involved in all major and minor surgical operations. This gives the student a general review of anatomy, laying greatest stress upon such parts as are most important to the surgeon.



EXPERIMENT STATION BUILDING.

THE SHORT COURSES.

There are large numbers of young people who from lack of means or time are unable to take an extended course of study, but whose usefulness in the world would be much increased by a little special training. Their earning capacity in the household or on the farm is far from what it might be, and they are thus handicapped in the struggle for a livelihood. To bring to this large portion of the "industrial classes," even in small measure, the "liberal and practical education" provided for by the organic act, the College has established certain short courses of study, with practice.

The teaching in these courses, while no whit less accurate than in the others, is upon a different plane. Taking students without scientific or mathematical training, the instruction must be more largely a giving of facts, without an elaboration of the underlying principles which the regular courses afford. The work is intensely practical. Studying such texts as any bright young man or woman can understand, receiving lectures of the same type, and putting into daily practice through industrial exercises the facts and principles learned in the classroom, the student cannot but be greatly benefited. It is hoped, too, that in many cases young people who had thought that they could not afford a four-year course will, by this taste of the advantages and pleasures of an education, be led into the regular courses.

These courses are put at the seasons of the year which seem likely to accommodate the most students, those for young men being given in the winter term, when farm work is more slack, and the young women's course being through the fall and winter. Four such courses are now offered: A dairy course of one winter term; a domestic science course of one fall and one winter term; a farmers' course of two winter terms, and a dairy course of one winter term.

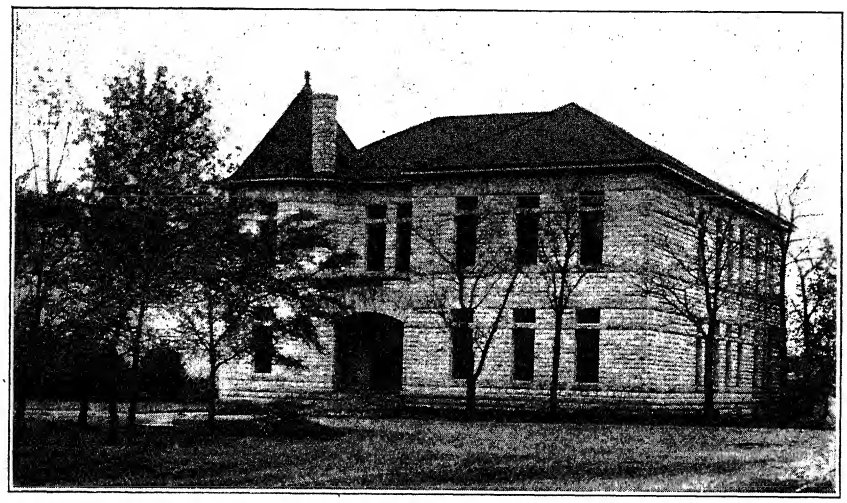
REQUIREMENTS FOR ADMISSION.

Persons at least eighteen years of age and of good moral character are admitted to these courses as follows:

Persons between the ages of eighteen and twenty-one will be admitted upon presentation of common-school diploma, grammar-school certificate, teacher's certificate, or high-school diploma, or upon passing an examination in the following subjects: Reading, writing, spelling, arithmetic, grammar, geography, physiology, and United States history. Persons over twenty-one will be admitted without examination, but should have sufficient education to enable them to understand the simple text-books used, and to handle readily problems in common and decimal fractions and percentage. They will be required to attend strictly and constantly to their duties, or leave. They have the same free use of the College

library that other students have. Owing to the peculiar nature of the work and to the slight degree of preparation which it assumes, *students are required to be present at the very beginning of the course, and those applying later will not be admitted.*

The short courses are in no sense equivalent to the long courses, and no one should take a short course who can take a whole or even a part of one of the long courses. All of the common-school preparatory and freshman branches are taught each term; so that it is possible for one to get nearly all subjects of the first two years by attending during the winter terms only.



KEDZIE (DOMESTIC SCIENCE) HALL.

DOMESTIC SCIENCE AND ART.

Short Course.

FALL TERM, THIRTEEN WEEKS.

Figures following subject indicate hours per week.

Lectures and Practice in Cooking	15
Sewing	15
Drawing	5

WINTER TERM, TWELVE WEEKS.

Lectures and Practice in Cooking	13
Home Nursing	2
Physiology and Hygiene	5
Vegetable-gardening and Floriculture	5
Dressmaking	10

FIRST TERM.

Lectures and Practice in Cooking. The study of stoves, stove construction, management and fuels are the first topics considered, followed by experiments illustrating the effect of heat upon starch and proteid. The principles are then applied to the cookery of cereals, vegetables, beverages, breads, meats, soups, and simple cake mixtures and puddings. At stated intervals lectures are also given on home sanitation and household accounts.

Sewing. Pupil makes a model-book covering the full course in hand sewing, and consisting of basting, gathering, darning, patching, etc. Machine practice, drafting, cutting and making underskirt and drawers; drafting, fitting and making dress without lining. Materials for the model work will be furnished by the College. Each pupil will furnish her own material for the garments, but if sufficient proficiency is shown in making the first garment, pupils may be allowed to take orders for the others.

Drawing. The work in drawing is especially adapted to the needs of this class of students; it will consist of free-hand and geometrical drawing.

SECOND TERM.

Lectures and Practice in Cooking. Canning, preserving, salads, cakes, pastries, desserts, the planning and serving of meals, and invalid cooking, are topics considered.

Home Nursing. This implies simple suggestions for the sick-room and its furnishings, and means of adding to the comfort of the sick.

Physiology and Hygiene. Physiology and hygiene of the human body, laws of health and care of the sick.

Vegetable-gardening and Floriculture. The first half of the term is devoted to vegetable growing. Subjects treated include the raising of vegetables for home and for market, with location, soils, manure, tools, irrigation, etc., best suited for crops grown in kitchen- and market-gardens; the construction and manipulation of hotbeds, cold-frames, and winter gardens; the growing of early and late crops, their special treatment, methods of cultivation, planting, transplanting, harvesting, and marketing; a study of varieties suitable to local conditions, and the origin, nature and methods of improvement of vegetables. The last half of the term is devoted to floriculture. Lectures in the classroom are supplemented by practical exercises in the greenhouses and gardens, treating of the propagation and culture of flowers, including the treat-

ment of seeds, cuttings, mixing of soils, potting, repotting, watering, cut flowers, packing, and many operations that attend amateur and commercial flower-gardening.

Dressmaking. Pupil will be taught the use of a dress-cutting system, cutting, fitting and making woolen dress. Pupil must furnish her own material, and cut and make a dress for herself.

DOMESTIC SCIENCE AND ART.

Summer Course.

FIRST SUMMER TERM, TEN WEEKS.

Figures following subject indicate hours per week.

Domestic Science	15
Sewing	10
Floriculture	5

SECOND SUMMER TERM, TEN WEEKS.

Domestic Science	5
Household Economics	5
Dressmaking	10
Bacteriology	5

This course will begin May 18, 1909, and close July 23.

This course was instituted to meet the needs of teachers in the public schools. Completion of one summer's work entitles to a one-year certificate to teach domestic science in the state; two summers' work entitles to two-year certificate. Only teachers now holding county or state certificates can enter these classes.

The teaching follows the same general line as in the regular course, with the exception that more stress is laid upon the methods of presentation to young students. There are daily lectures and recitations on the theoretical portion and the laboratory experiments in cooking. The sewing is the same as that taught in long course under sewing I, sewing II, sewing III, and dressmaking.

FARMERS' SHORT COURSE.

FIRST YEAR, WINTER TERM, TEN WEEKS.

Figures following subject indicate hours per week.

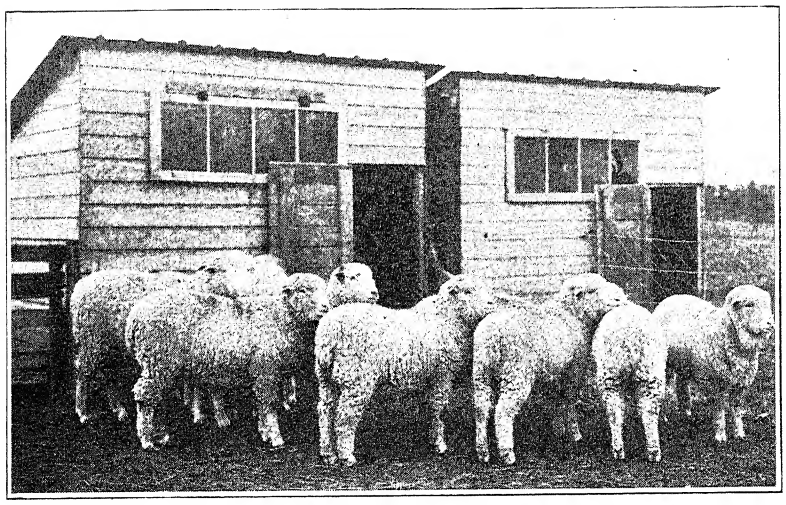
Crop Production	5
Feeds and Feeding	5
Breeds of Live Stock	5
Stock Judging	5
Horticulture	5
Carpentry	5

SECOND YEAR, WINTER TERM, TEN WEEKS.

Botany	5
Elementary Physics	5
Farm Mechanics and Management	5
Diseases of Farm Animals	5
Grain Judging	5
Blacksmithing or *Traction-engines*	5

FIRST YEAR.

Crop Production. A study of the soil—its formation, types or classes, composition, characteristics, uses, physical characters, texture, pur-



SHEEP.

poses and problems of tillage, conserving soil moisture, warming, ventilating and draining the soil. The implements of tillage; principles involved in their construction and use. A study of the plant—its relation to soil and climate; its life, growth, and propagation; its root system, principles of seed selection, preparation of seed-bed, methods of cultivation, etc. The fertility of the soil, tillage, manures, fertilizers, and rotation of crops. A study of crops by classes and varieties, as grains, grasses, corn, forage, silage, soiling and root crops; practical methods of culture—saving, feeding, and marketing. Text-book, Bailey's Principles of Agriculture.

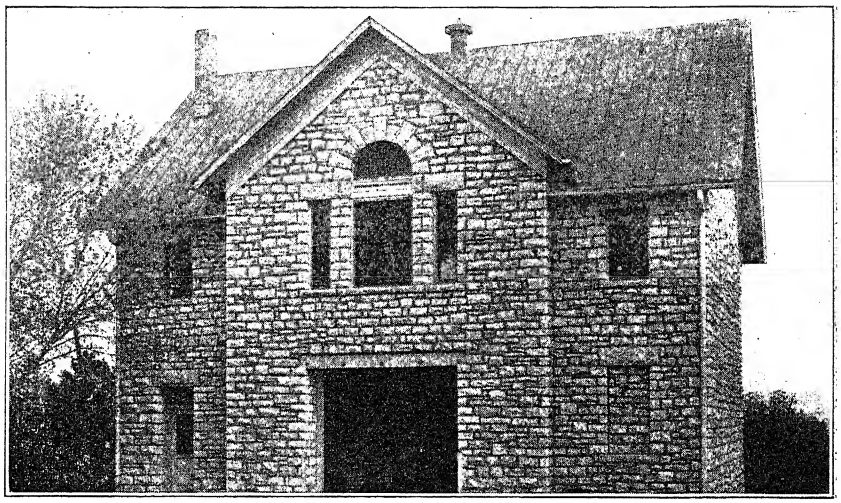
Feeds and Feeding. The properties of feed stuffs, and their combination to secure good returns at least cost with products having the desired qualities; effect of feeds on quality of products; construction of farm buildings and appliances to secure the best returns from feed and for saving labor; a study of the feeding on the College farm. Text-book, Henry's Feeds and Feeding.

Breeds of Live Stock. A study of the market types of live stock; history and characteristics and adaptability of the breeds of live stock; selection and judging of live stock according to the official standards; forms as an index to qualities; practice in tracing out pedigrees. Text-books: Shaw's Breeds of Live Stock, Craig's Stock Judging.

Stock Judging. Practice work. Practice in judging chickens, beef cattle, dairy cattle, hogs, horses and sheep according to official standards.

Horticulture. General principles underlying plant growth; structure and functions of the various parts of the plants; nutrition, formation of seeds, etc.; propagation by seedage, cuttage, graftage, and layerage; environment, including the effects of temperature, light, feed- and water-supply; possibilities of improvement by cultivation, training, and selection. Text-book, Goff's Principles of Plant Culture.

Carpentry. Elementary woodwork in joinery and construction, followed by general woodwork and carpentry; care and use of farm machinery; the building of frame structures, such as stables, piggeries,



SEED HOUSE.

poultry-houses, ice-houses, and farm creameries, will be given, both by lectures and practical work.

SECOND YEAR.

Botany. The laws of plant growth which have a direct bearing upon the raising of grasses, grains, clovers, forage-plants, and weeds; a study of the common fungi that affect cultivated plants; seed testing; practical methods of farm seed-breeding.

Elementary Physics. This course is designed to give the student a knowledge of the fundamental principles upon which the various physical phenomena depend. The course does not provide laboratory practice. Numerous class demonstrations illustrate the various subjects of mechanics, hydrostatics, heat, light, sound, etc.

Farm Mechanics and Farm Management. The first half of the term will be devoted to rural engineering and farm machinery, and will include laying out of the farm, as regards the selecting of building sites, location of farm buildings, division of the farm into fields, and plans for crop rotation; the construction of buildings and works as to the principles of construction, plans, specifications and estimates of the cost of farm buildings, and the water-supply, sewerage, drainage, roads, fences, etc.

Several lectures will be devoted to the elements of machines, disclosing the principles involved in the use of the lever, evener, wheel and axle, pulley, inclined plane, and wedge. The several classes of farm machinery will be taken up in their order and studied as to the principles of construction and use of each machine, and attention will be given to the operation, care and repairing of farm machinery, and to the building of machinery sheds.

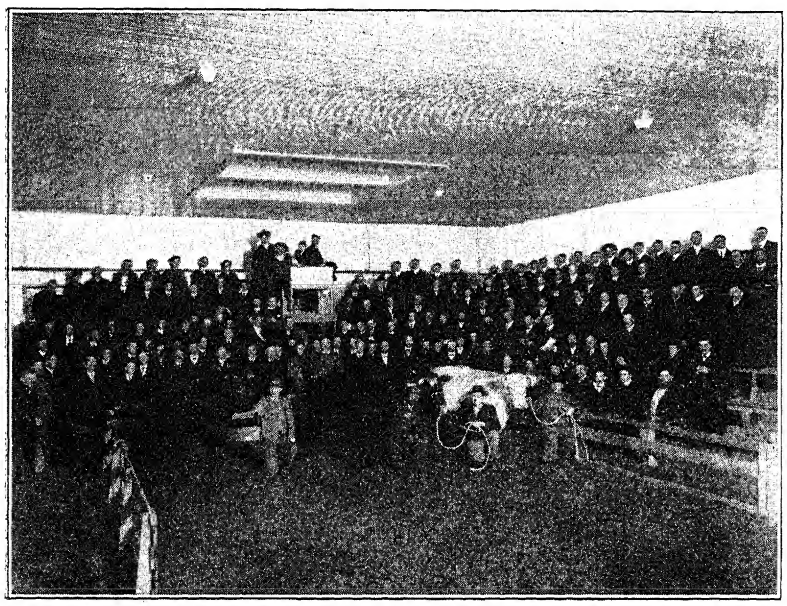
During the latter half of the term, instruction and practice work will be given in keeping farm accounts, and in the application of business methods to farm operations. Economic questions relating to the employment and management of farm help, outlay for farm equipment, buildings, and improvements, the buying of machinery and marketing of crops, will receive attention. Some instruction will be given in simple

questions of rural law, relating to property, deeds, leases, contracts, water-rights, line fences, notes, bills of sale, mortgages, interest, taxes, etc. Text-book, Robert's Farmers' Business Handbook.

Diseases of Farm Animals. The common ailments of farm animals are discussed, their causes and symptoms explained, and preventives and remedies suggested. Inoculation against blackleg will be performed by the student in this course.

Grain Judging. This will be a continuation of the study of crop production, and will consist mainly of work in the judging-room, in scoring corn and the common cereals according to inspectors' and buyers' standards or according to recognized standards of perfection. Lectures and quizzes will be given, explaining the work in the judging-room. A special study will be made of corn in the selection of seed ears. Very few farmers will select a "good" ear of corn before they have been carefully instructed and trained to note defects and vital points. It is necessary to know the characteristics of a breed and its recognized standard of perfection before one can intelligently select breeding animals. This is true also of a variety of corn or wheat, and the improved qualities of higher protein, greater vitality and larger productiveness which may be bred into corn by careful and intelligent selection should greatly increase the value of this crop to the farmer.

Blacksmithing. Forging and welding, construction of singletree clips, wagon ironing, clevises, horseshoes, sharpening and tempering plows and tools, general repair work. Advanced work is also offered in the care and management of boilers and engines. If the student desires, he can make a forge and set of blacksmith tools to take home with him, paying only for the iron used.



STOCK JUDGING.

DAIRY COURSE.

FIRST WINTER TERM, TEN WEEKS.

First column of figures indicates hours per week.
Second column of figures indicates laboratory or industrial hours.

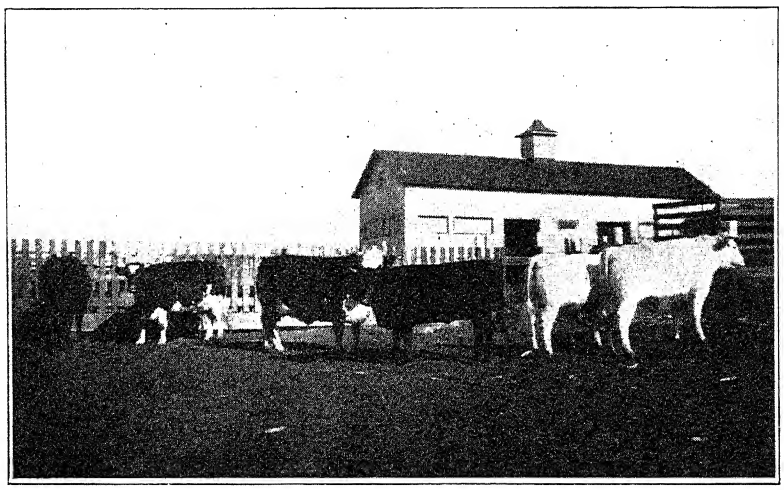
Feeds and Feeding	2½	
Breeds and Breeding		
Judging Dairy Cattle		2
Dairy Management		4
Diseases of Dairy Animals	2½	
Crop Production	5	
Dairying	5	6
Dairy Bacteriology	2½	

SECOND WINTER TERM, TEN WEEKS.

Creamery Management	2½	
Dairy Mechanics and Refrigeration		
Butter- and Cheese-making	5	10
Boilers and Engines—laboratory		4
Dairy Chemistry	2½	
Dairy Bacteriology	2½	
Marketing Milk	2½	2
Ice-cream Making		
Judging Dairy Products		2

FIRST YEAR, WINTER TERM, TEN WEEKS.

Feeds and Feeding. During the first half of the term lectures will be given on feeds and feeding dairy cattle; compounding rations to meet the needs of young, growing and mature dairy animals; forming maintenance rations for the different classes of animals, and feeding according to the needs of animals giving different yields of milk. This work will be supplemented by work at the stables in feeding and keeping herd records of feeding and milk yields.



SOME PRIZE CATTLE.

PRIZE ANGUS CATTLE.

Breeds and Breeding. During the last half of the term lectures will be given on the history and origin of dairy breeds and the breeding and general care and management of dairy stock.

Judging Dairy Cattle. Practice in the use of score-cards in judging breeds and individual animals, according to the official standards. Testing and recording dairy cows for advanced registry, and tracing pedigrees.

Dairy Management. (Laboratory.) Location and construction of farm dairy buildings, dairies, shelters, and dairy barns.

Diseases of Dairy Animals. Lectures and recitations will be given on the common ailments of dairy stock, their causes, prevention, and treatment.

Dairy Bacteriology. Lectures on dairy bacteriology and the effect of bacteria on the production, handling, care, keeping qualities and healthfulness of dairy products.

Dairying. Lectures and recitations on the production, composition, handling and care of milk and cream; separating, ripening and churning cream; washing, salting, printing and marketing butter.

Laboratory.—Practice in handling milk and its products, from the time it leaves the cow until it is marketed as butter, cheese or sanitary milk, including the operation of separators, Babcock testers, aerators, coolers, sterilizers, churns, butter-workers, acid-testers, and other necessary equipments.

The remainder of this course is the same as the first year of the farmers' short course.

SECOND YEAR, WINTER TERM, TEN WEEKS.

Dairy Mechanics and Refrigeration. The first half of this course is devoted to lectures and practical work in studying and operating creamery machinery; locating and installing equipment for creameries; figuring out speeds of pulleys and shafts; operating gasoline-engines, milking-machines, and refrigerating and ice-making plants.

Creamery Management. This includes practical work in keeping creamery records; figuring out over-runs; detecting creamery losses and unnecessary wastes; utilizing by-products of the creamery; location and construction of receiving stations, milk depots, ice-cream factories, and creameries.

Butter- and Cheese-making. This course consists of lectures on handling milk and cream on a commercial scale, including factory butter- and cheese-making; operating receiving stations, milk depots and ice-cream factories.

Laboratory.—Practice is given in cooling and bottling milk and cream; separating, ripening and churning cream; washing, salting, working, printing and marketing butter; preparation and use of starters; the details involved in the manufacture of cheese, from the receipt of the milk to the marketing of the finished products.

Boilers and Engines. Lectures and laboratory practice on the firing of boilers, care and running of engines, pumps, etc.

Dairy Chemistry. Lectures on the composition of dairy products, and the causes and control of chemical changes that take place in these products.

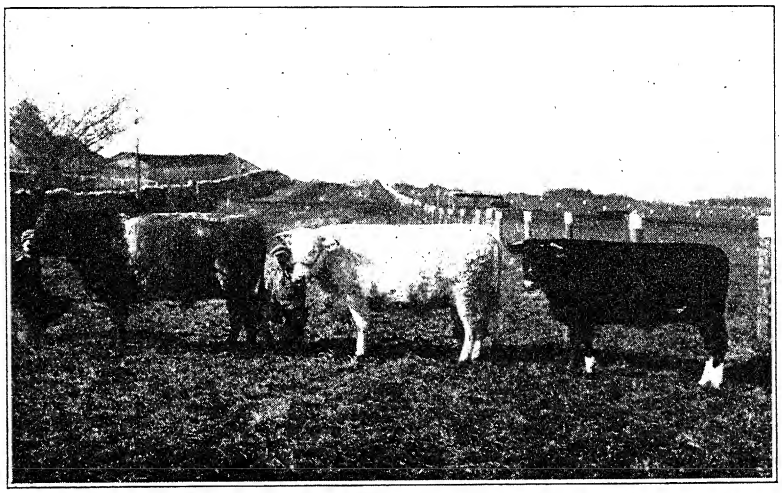
Dairy Bacteriology. The bacterial analysis of milk; lectures and practice in the preparation of media, and the bacteriological analysis of milk and other dairy products; dairy sanitation; and the general relation of bacteriology to the dairy industry.

Market Milk. Lectures and practice on the economical production of milk; operating the milking-machines, aerators, pasteurizers, coolers, bottlers, and the marketing of milk and cream. The production of sanitary, certified and modified milk for city trade.

Ice-cream Making. Lectures and practice in the manufacture of ice-cream and ices, for retail and wholesale trade.

Judging Dairy Products. Practice is given in the judging and scoring of butter, cheese, milk, cream and ice-cream.

The second year is open only to those who have satisfactorily completed the first year's course, or who have had practical experience in some branch of commercial dairying.



SHORT-HORN CATTLE.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

"See that he (the college student) is in the fullest sense a man and a good man."—PRESIDENT ROOSEVELT.

"Character is of more importance than education."—PRESIDENT SCHURMAN, *of Cornell University.*

"The young men going to college will be the leaders of society in the future. If they leave the college as earnest Christians, they will exert good influence throughout their lives."—HON. JAMES WILSON, *United States Secretary of Agriculture.*

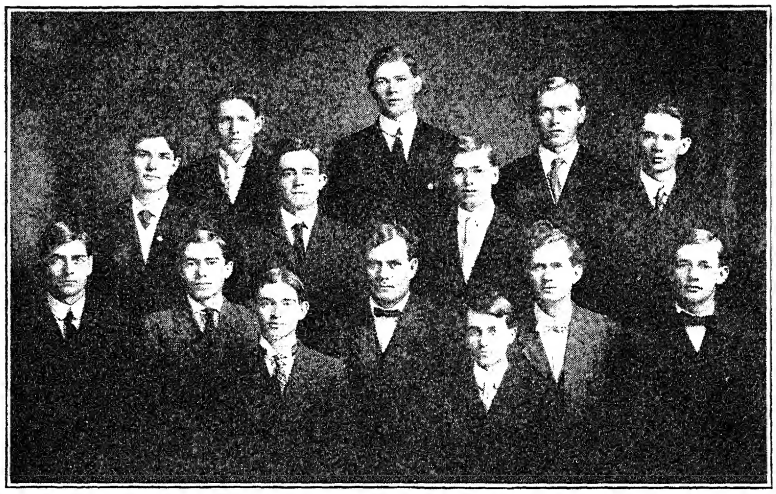
"It is a holy mission to reform a boy or man after he has gone wrong, but it is still better to save him from going wrong."—HON. ALBERT CUMMINS, *Governor of Iowa.*

OBJECT. The Young Men's Christian Association is organized for service. Any young man in the College who is of good moral character may belong. Although its distinct function is religious, it is not exclusively such. Active membership is limited to those belonging to evangelical churches, while those young men who are not church members but who believe in good, clean living may join as associate members.

HEADQUARTERS. In the fall of 1903 the Association rented what is known as Park Place, situated at the corner of Eleventh and Fremont streets, and for five years this building served its purpose well. While this building has been of great service to the young men, yet it did not prove adequate to meet the needs of the association and the student body. For four years a canvass has been carried on for a new building. This canvass was far enough along last spring to begin work on the new building. This building has been completed, and on the 6th of May the Young Men's Christian Association moved into their new quarters, which contain reading- and game-rooms, recreation-rooms, eighteen rooms for students' living-rooms, dining-room, and a gymnasium 42 x 70, with lockers, baths, etc. The cost of the building, complete, will be about $35,000. This building will be open to all students. A fee of five dollars a year will be charged for the use of gymnasium and baths.

NEW-STUDENT WORK. New students are met at trains, taken to headquarters, and assisted to find rooms. A handbook published by the two associations and containing valuable information to the new student is given to each one. At the College, in the main building, an information bureau is kept during the first few days of College. The parlors of the Young Men's Christian Association house are wide open for each new student. Every evening of the opening days special amusements are offered. A "stag" social is given to all new men on one of the first evenings of the term.

EMPLOYMENT BUREAU. Students are assisted to find work free of



Y. M. C. A. CABINET.

charge. This work is under the supervision of the general secretary, assisted by an employment bureau committee.

BIBLE STUDY. The association offers three or four Bible study courses. A regular systematic course is studied. The classes meet once a week, under student leaders. Three hundred and eighty men were enrolled in thirty different classes during the past year. A force of fifty men will prepare themselves during the summer to lead classes during 1908-'09.

MISSION STUDY. Several courses in the study of missions will also be offered by the association. Many men have received a broad general knowledge of foreign lands by this study.

REGULAR MEETINGS. The association holds its regular meetings on Thursday evenings, 6:45 to 7:30. These meetings are usually led by students, but sometimes outside speakers and faculty men are invited to address the young men. Occasional Sunday afternoon meetings are held.

SOCIALS AND RECEPTIONS. From time to time socials and receptions are held. These serve to draw the men closer together. At the beginning of the fall and winter terms there is given a social especially planned for the new students.

CORRESPONDENCE. The association employs a general secretary on full time. Any prospective student who desires information not contained in this catalogue may feel free to write to him.

Address, GENERAL SECRETARY Y. M. C. A., KANSAS STATE AGRICULTURAL COLLEGE, Manhattan, Kan.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

The Young Women's Christian Association seeks to bring before the girls of the College high ideals of intellectual, social and spiritual development. It employs numerous means for accomplishing this, and earnestly invites each College girl to become one of its members.

The regular weekly devotional meetings are held each Saturday noon, and Bible and mission study classes are open to all who may wish to attend.

Trains are met at the beginning of the term, and help given in securing rooms and boarding-places. Look for a girl wearing a purple bow, and she will be glad to help you.

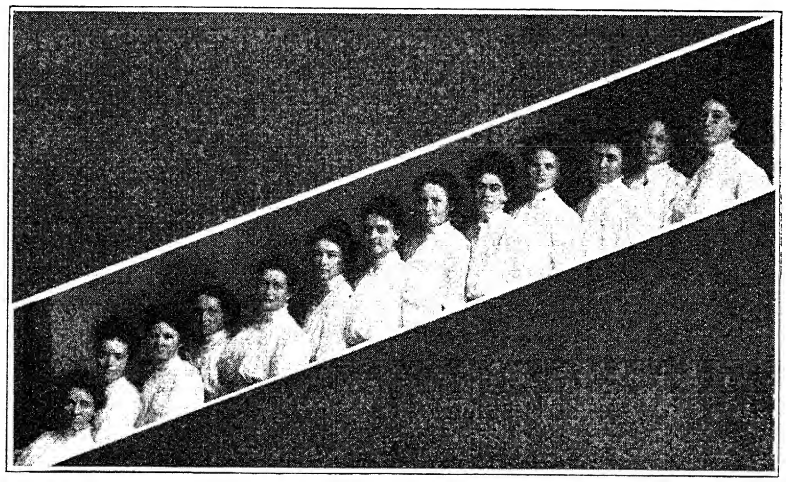
A Young Women's Christian Association house is maintained, where all girls are welcome at all times. The house is always open for those coming on late trains, and if no one should meet you when you arrive in Manhattan you will receive a welcome at the house and help will be given.

The headquarters of the association on the College grounds are on the first floor, southwest corner of the new domestic science and art building, and these rooms are open to visitors at any hour in the day. The rooms include a rest-room, where girls may rest or study, a hospital-room furnished with beds, and the general secretary's office.

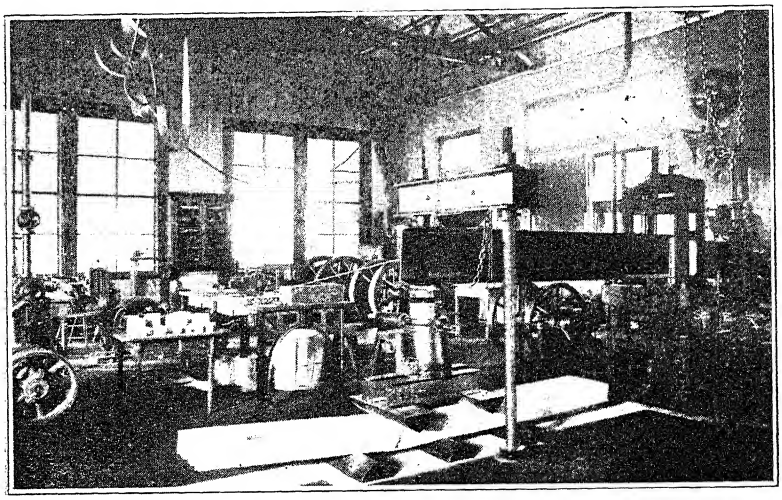
A reception is held on the first Friday night after College opens, where old and new students may become acquainted.

An employment bureau is conducted, for assisting girls in securing work. If you wish work, write to the general secretary, and she will be glad to answer any questions in regard to association work or rooming- and boarding-places. She wishes each girl to feel that she may find in her a friend—one to whom she may go at any time for advice or help.

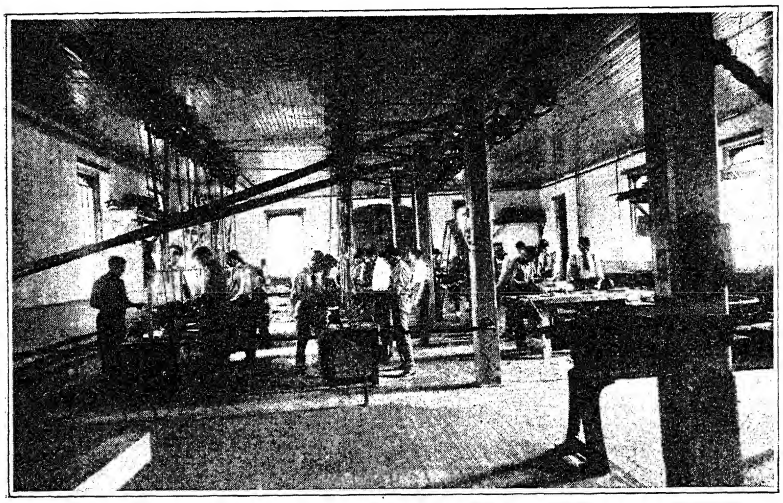
Address, GENERAL SECRETARY Y. W. C. A. of K. S. A. C., 1019 Bluemont avenue, Manhattan, Kan.



Y. W. C. A. CABINET.



CEMENT TESTING LABORATORY.



PATTERN-MAKING ROOM.

GENERAL INFORMATION.

TERMS OF ADMISSION.

Persons over fourteen years of age will be admitted in any of the following ways:

1. Kansas teacher's certificate, provided no subject is below seventy per cent.
2. Diploma received on completion of county course of study.
3. Certificate of passing the grammar grade or diploma from the high school of any city or county.
4. Pass a satisfactory examination in reading, spelling, writing, geography, arithmetic, United States history, English grammar, and physiology.

Persons over eighteen years of age will be admitted to the preparatory classes if unable to pass the common-school branches.

Full admission to the freshman year, in addition to the common-school branches—reading, spelling, writing, geography, arithmetic, United States history, English grammar, and physiology—requires bookkeeping, advanced English grammar, English readings, English composition, algebra through progressions, elementary botany, ancient, medieval and modern history. (See Preparatory Department.)

It is quite possible for a good student who enters somewhat behind to make up his deficiency in a year or two and graduate in four years.

All of the preparatory and freshman studies are taught each term, and nearly all of the sophomore subjects; so that a person may enter at the beginning of any term and find work suited to his advancement.

Examinations for admission are held at the beginning of each term. Applicants at other times during the school year have special examinations. These examinations are chiefly written, and a grade of seventy per cent., at least, must be obtained to pass a study.

On entrance, applications for advanced standing in the course or for credits for certain studies in the courses may be made through the chairman of the committee on examinations. Students desiring credit for work done elsewhere must bring certificates and catalogues to show that the work done is equivalent to ours. The right is reserved to cancel any credits if the work of the student in succeeding branches shows insufficient preparation. After entrance, such applications should be made to the professor in charge of the study. In any case the applicant will be required to pass such an examination as the professor in charge deems necessary.

EXAMINATIONS.

Examinations in the courses are held twice each term, as announced in the calendar. The results of the examinations, marked on a scale of 100, are combined with the grades of the preceding daily exercises into

a grade for the period. Grades reported to the Secretary for record are made up by giving the mid-term record a value of one-third and the record for the last half of the term a value of two-thirds. For passing a study, the mean grade so calculated must be at least seventy. Any student receiving less than a passing grade on two or more studies may be required to drop back or withdraw from the College. Any student may receive a certificate of standing, upon leaving College at the close of a term.

Students deficient in entrance studies must make good such deficiencies before entering on the work of the second year. Students are not catalogued in the junior class unless all deficiencies of the preceding year are provided for. Candidates for graduation must make good all deficiencies before entering on the work of the spring term of the fourth year. No student is considered as a candidate for graduation who, after the opening of the fall term, is deficient more than three full studies in addition to regular work. Extra work is not allowed to any student who failed in any branch the preceding term, or whose average grade for all branches was less than eighty.

A student receiving less than sixty per cent. in any subject shall not be allowed a special examination in that subject, but shall be required to pursue it in class at the first opportunity. A mark of sixty per cent. or over, but less than seventy per cent. shall be called a condition. A student receiving a condition in any subject shall, in case the subject is susceptible to an examination, be entitled to take the condition examination in that subject at the time and place regularly appointed for it. He shall not take a condition examination at any other time or place except by two-thirds vote of the Faculty. It shall be the duty of the student receiving a condition to learn the time and place set for the condition examination and be present at that examination without any notification from his instructor or assignor. In subjects not susceptible to examination, conditions shall be made up at the time and in the manner determined by the head of the department in which the subject is taught. Condition examinations shall be held on the second Monday of each term, for the subjects of the preceding term. A condition not made up at the first opportunity shall be changed to a failure and the student be required to repeat the subject in class.

A student receiving a condition may, in the judgment of the assignor, be assigned to dependent subjects. Should he fail to make up the condition at the time set, he shall be required to drop the dependent subjects and be given no grade for the work he has done. In industrial work, the instructor may withhold the grade of any student and send in a mark of deficient when the quality of the work done by the student is satisfactory but the quantity is not. A deficiency shall be made up when the student has completed the required quantity of work in a satisfactory manner. A deficiency may be made up outside of class, but shall be made up by the end of the fourth week of the term following that in which it was made, or be changed to a failure and the student be required to repeat the subject.

Permission for examination in studies not pursued with a class must be obtained from the committee on assignments, and on recommendation

of the professor in charge, at least two months before the examination is held. All such examinations are held under the immediate supervision of the professor in charge, and are thorough and exhaustive.

REGULATIONS IN REGARD TO SUBSTITUTIONS.

With the thirteen regular courses that the College now offers, most of the requirements of students are met. For one reason or another, however, students find it necessary or desirable to substitute something else for the work that their respective course would require. To place such substitutions on a systematic basis, the following regulations have been adopted by the Faculty:

1. Substitutions shall, as far as practicable, give training similar to that of the work displaced.

2. No student shall be allowed a substitution for work in which he has failed.

3. Unless made necessary by the acts of the Board of Regents or of the Faculty, substitutions shall not be allowed: (*a*) To students who are below the third year; (*b*) to students who have failed in any study of the two terms' work immediately preceding; (*c*) unless arranged for in advance.

4. Students desiring to substitute other work for any requirement in their respective courses of study must present written requests to the committee on substitutions.

5. When a request for substitution is made by any student, the committee on substitutions shall consult with all of the professors whose work is touched by the proposed substitution, and if unable to agree with them the case shall be submitted to the Faculty.

6. All substitutions arranged by the committee on substitutions shall be reported to the Faculty by posting on the Faculty bulletin-board, and if not objected to within one week shall be reported to the Secretary for record in the students' register.

GENERAL DUTIES AND PRIVILEGES.

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged to the formation of sound character by both precept and example, and expected, "upon honor," to maintain a good repute. No other rules of personal conduct are announced.

Classes are in session every week-day, and no student may be absent without excuse. Students cannot honorably leave the College before the close of a term, unless excused beforehand. A full and permanent record of attendance and scholarship shows to each student his standing in the College.

The relations of our College buildings, and the nature of the exercises, complicated as they are by laboratory work, shop practice and labor, make order, punctuality and systematic effort indispensable. The institution, therefore, offers no inducement to the idler or the self-indulgent. All who are too independent to submit to needful authority, too reckless to accept wholesome restraint, or too careless to take advantage of their opportunities, are not advised to come. The discipline of the College is

confined mainly to sending away those who prove on fair trial to be of this class.

Chapel exercises occupy fifteen minutes before the meeting of classes each morning.

There are nine prosperous literary and scientific societies, which meet weekly in rooms set apart for their use—the Alpha Beta and Franklin, open to both sexes, and the Ionian and Eurodelphian for young women. The Webster, the Hamilton, the Agricultural Association, the Engineering Association and the Architectural Club admit to membership young men only.

At various times during the year the College halls are opened for social and literary entertainments for the whole body of students, or for classes. For the last nine years the students have organized and presented courses of entertainments, which have been of high value, and of moderate expense to each individual.

EARNING ONE'S WAY.

The courses of study are based upon the supposition that the student is here for study, and a proper grasp of the subjects cannot be obtained by the average student unless the greater part of his time is given to College studies. Students in strained circumstances are encouraged and aided in every way possible, but unless exceptionally strong, both mentally and physically, are advised to take lighter work by extending the course, if obliged to give any considerable time to self-support. As a rule, a student should be prepared with means for at least a term, as some time is necessary for one to make acquaintances and learn where suitable work may be had.

The lines in which employment may be had are various. The College itself employs student labor to the extent of about $1200 per month, the rate paid being twelve and one-half cents per hour. This work is on the farm, in the orchards and gardens, in the shops and printing-office, for the janitor, etc. As one's ability and trustworthiness become established, more responsible and more remunerative work may be had, to a limited extent. Many students obtain employment in the town; some work for their board in families in town or in the country near the College. Labor is everywhere respected, and the student who earns his way is honored by all. He will necessarily have little time for the lighter pleasures that may be incident to College life.

EXPENSES.

TUITION IS FREE. An incidental fee of $3 per term will be charged all students from Kansas. Students from outside of Kansas will be charged an incidental fee of $10 per term, and an enrolment fee of $10. Each student must present receipt for incidental fee before enrolment in classes. Rooms, board and washing are not furnished by the College. Board, with furnished room, can be procured in private families at $2.50 to $3.50 per week, or table board in student clubs from $2.25 to $2.50 per week. Furnished rooms, without board, can be obtained at from $3 to $5 per month. Some students board themselves at even less cost, and rooms for the purpose can be obtained at a rent of from $1 to $3.50 per month. Washing costs from 50 cents to 75 cents per dozen. Books cost

about $3 per term. Young men of the freshman and sophomore years will be required to have military uniforms costing about $16, and the young women of the freshman year must have a physical-training suit costing about $4. Ordinary expenditures, aside from clothing and traveling expenses, range from $125 to $200 per year. No institution in the state furnishes an education at less cost to the student.

BUSINESS DIRECTIONS.

General information concerning the College and its work, studies, examinations, grades, boarding-places, etc., may be obtained from the President or the Secretary.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several professors and superintendents.

Loans upon school-district bonds are to be obtained from the State School-fund Commission, Topeka.

Bills against the College should be presented monthly, and, when audited, are paid from the office of the state treasurer.

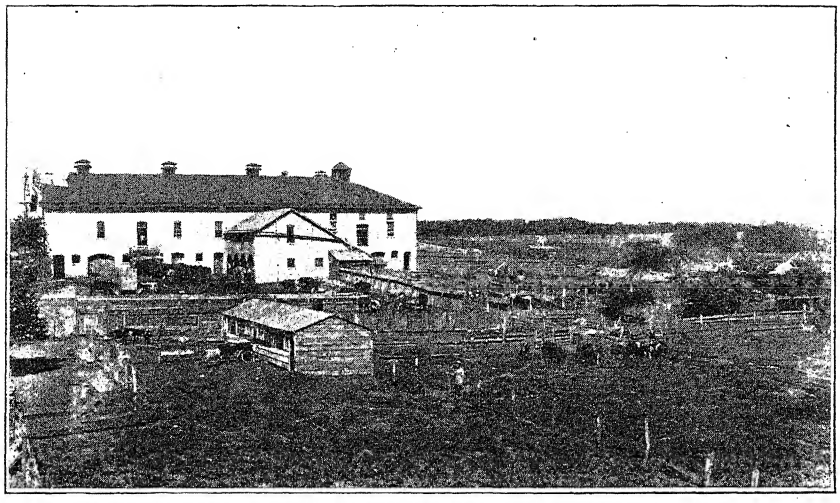
All payments of principal and interest on account of bonds or land contracts must be made to the state treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The *Industrialist* may be addressed through President E. R. Nichols, managing editor.

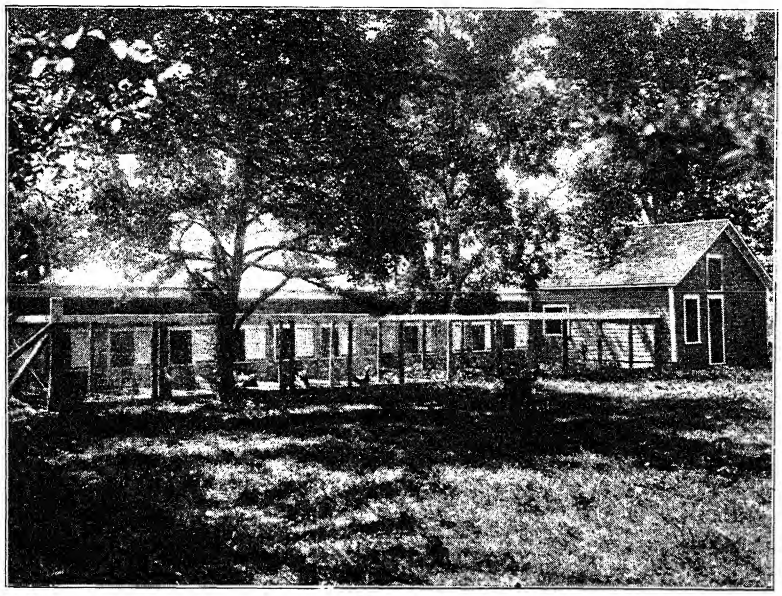
Donations for the library should be sent to the Librarian; donations for the museum, to the curator of the museum.

Applications for farmers' institutes should be made as early in the season as possible, addressing Institute Department, Kansas State Agricultural College.

Applications for the publications of the Experiment Station, and general inquiries concerning its work, should be addressed to Agricultural Experiment Station; but correspondence concerning any special line of investigation should be sent to the member of the staff in charge of the work concerning which information is desired.



BARN AND STOCK-YARD.



POULTRY-HOUSE AND YARD.

LIST OF STUDENTS.

GRADUATES.

CANDIDATES FOR MASTER'S DEGREE, 1908.

Edith Anna Goodwin, B. S. '03 ..... *Chemistry, Mathematics.*
Detroit, Dickinson county.

Charles H. Withington, B. S. '06 ..... *Entomology, Forestry, German.*
Manhattan, Riley county.

IN COURSE LEADING TO MASTER'S DEGREE.

Michael Francis Ahearn ..... *Horticulture, Botany.*
Manhattan, Riley county.

Elva Veola Akin ..... *Domestic Science.*
Manhattan, Riley county.

L. Ethel Clemons ..... *Domestic Science.*
Manhattan, Riley county.

Claude Carroll Cunningham ..... *Agriculture, Botany.*
Manhattan, Riley county.

Daisye Ina Harner ..... *Domestic Science, Chemistry.*
Manhattan, Riley county.

Maude Hart ..... *Domestic Science, Domestic Art.*
Manhattan, Riley county.

Arthur Hurchel Helder ..... *Horticulture, Botany, Landscape-gardening.*
Manhattan, Riley county.

Adah Lewis ..... *Chemistry, Bacteriology, Philosophy, Geology.*
Manhattan, Riley county.

Atsushi Miyawaki ..... *Dairying, Chemistry, Bacteriology.*
Manhattan, Riley county.

Virginia Viola Norton ..... *Domestic Science, German.*
Manhattan, Riley county.

Arthur L. Peck ..... *Horticulture, Entomology, Botany.*
Manhattan, Riley county.

Edwin George Schafer ..... *Agriculture, Entomology.*
Jewell, Jewell county.

IN ADVANCED COURSE NOT LEADING TO A DEGREE.

Pearle Akin ..... *German, Domestic Art, Music.*
Manhattan, Riley county.

Ethel Barber ..... *Philosophy, Music.*
Manhattan, Riley county.

Clare Biddison ..... *Domestic Science, Music.*
Manhattan, Riley county.

Flora Edna Brenner ..... *English, Music.*
Manhattan, Riley county.

IN ADVANCED COURSE NOT LEADING TO DEGREE.

Mary Margaret Cole ..... *Philosophy, Music.*
Manhattan, Riley county.

Irene Ingraham ..... *German, Philosophy, Music.*
Manhattan, Riley county.

Carl E. Mallon ..... *Mechanical Engineering.*
Ogden, Riley county.

Jessie Reynolds ..... *Music.*
Manhattan, Riley county.

Burton R. Rogers ..... *Dairying.*
Manhattan, Riley county.

Wilson George Shelley ..... *German, Philosophy.*
McPherson, McPherson county.

Julia C. Spohr ..... *Domestic Science, Domestic Art.*
Manhattan, Riley county.

Marcia Elizabeth Turner ..... *English, Music.*
Manhattan, Riley county.

SENIORS.

Name.	Post-office and county (or state).
Franklin Alexander Adams,	Maplehill, Wabaunsee.
Jessie Patience Allen,	Manhattan, Riley.
Clyde Harrison Alspaugh,	Lincolnville, Marion.
Eva Irene Alspaugh,	Lincolnville, Marion.
Marie Rilda Bardshar,	Mount Hope, Sedgwick.
Ernest Elmer Beighle,	Manhattan, Riley.
Hulda L. J. Bennett,	Manhattan, Riley.
George P. Berger,	Longford, Clay.
Edna Eleanor Biddison,	Manhattan, Riley.
Horace E. Bixby,	Manhattan, Riley.
Mabel J. Bower,	Manhattan, Riley.
Charles Joseph Boyle,	Spivey, Kingman.
Raymond W. Brink,	Manhattan, Riley.
James E. Brock,	Manhattan, Riley.
Ruby Mildred Buckman,	Conway, McPherson.
Elmer A. Bull,	Manhattan, Riley.
Ralph Elmer Caldwell,	Manhattan, Riley.
Walter W. Carlson,	Mingo, Thomas.
Wayne B. Cave,	Manhattan, Riley.
Ralph Thompson Challender,	Burrton, Harvey.
Esther Evangeline Christensen,	Randolph, Riley.
George Sidney Christy,	Howard, Elk.
Lee S. Clarke,	Wagoner, *Oklahoma.*
Katherine Cooper,	Manhattan, Riley.
Bernard C. Copeland,	Idana, Clay.
Alexander B. Cron,	Augusta, Butler.
Sol Whitney Cunningham,	Manhattan, Riley.
Curtis Lynn Daughters,	Manhattan, Riley.
Bernice Ada Deaver,	Ionia, Jewell.
Maxwell C. Donly,	Powhattan, Brown.
Charles Doryland,	Junction City, Geary.
Florence Edith Dresser,	Manhattan, Riley.
George Richard Eaton,	Highland, Doniphan.
Mary Amy Elder,	Osage City, Osage.
Louise Fleming,	Tecumseh, Shawnee.

Name.	Post-office and county (or state).
Carl Forsberg,	Manhattan, Riley.
Mary Eliza Gaden,	Riley, Riley.
David Emerson Gall,	Reserve, Brown.
Erma Gammon,	Ramah, *Colorado.*
Clarence T. Gibbon,	Hartford, Lyon.
Oliver Holmes Gish,	Manhattan, Riley.
George G. Goheen,	Manhattan, Riley.
Cecile Agnes Graham,	Manhattan, Riley.
Olin Graham,	Floyd, *Texas.*
Roy R. Graves,	Kansas City, Wyandotte.
Edna Gertrude Grizzell,	Claflin, Barton.
Helen H. Halm,	Topeka, Shawnee.
Dora Inez Harlan,	Walnut, Crawford.
Frank Clyde Harris,	Harveyville, Wabaunsee.
Maude Harris,	Harveyville, Wabaunsee.
Elizabeth Hassebroek,	Manhattan, Riley.
Fred M. Hayes,	Kansas City, Wyandotte.
Leon George Hoffman,	Manhattan, Riley.
Edith Antonette Holmberg,	Manhattan, Riley.
Annice Howell,	North Topeka, Shawnee.
Charles Clinton Howenstine,	Manhattan, Riley.
Ralph H. Hull,	Manhattan, Riley.
Helen Knostman Huse,	Manhattan, Riley.
Esteban Ibalio,	Pasuguin, Luzon, *P. I.*
Estella May Ise,	Downs, Osborne.
Charles Jacobus,	Manhattan, Riley.
Elmer Johnson,	Latimer, Morris.
Edward M. Johnston,	Caldwell, Sumner.
Edith Ellen Jones,	Cawker City, Mitchell.
John Seneca Jones,	Broughton, Clay.
Edith B. Justin,	Manhattan, Riley.
Maude Kelly,	Kansas City, Wyandotte.
Ada Kennedy,	Topeka, Shawnee.
Almira Elnora Kerr,	Clay Center, Clay.
Venus Kimble,	Keats, Riley.
Walter J. King,	Enterprise, Dickinson.
William Arthur King,	Manhattan, Riley.
Arthur W. Kirby,	Ottawa, Franklin.
Orville M. Kiser,	Sedgwick, Harvey.
Elsie Kratzinger,	Manhattan, Riley.
Carl C. Long,	Neodesha, Wilson.
William Thomas McCall,	Wa Keeney, Trego.
Faye Gertrude McConnell,	Minneapolis, Ottawa.
Olive R. McKeeman,	Soldier, Jackson.
Ethel Olive McKeen,	Russell, Russell.
Fred B. McKinnell,	Maize, Sedgwick.
Harry Charles McLean,	Mankato, Jewell.
Henry Alexander McLenon,	Everest, Brown.
Vicente G. Manalo,	Taal, Batanzas Prov., *P. I.*
Eleanor March,	Manhattan, Riley.
Phillip Edward Marshall,	Denison, Jackson.
Ethel Madge Martin,	Mound City, Linn.
Jessie Lou Marty,	Merriam, Johnson.
Virginia Lee Meade,	Topeka, Shawnee.
James Arthur Milham,	Waverly, Coffey.
Fred Carl Miller,	Belvue, Pottawatomie.
George A. Moffatt,	Clyde, Cloud.
Harry H. Momyer,	Great Bend, Barton.
Ross Moorman,	Burr Oak, Jewell.
Edward Allen Morgan,	Brainerd, Butler.

Name.	Post-office and county (or state).
Orr O. Morrison,	Manhattan, Riley.
Charlotte Augusta Morton,	Tescott, Ottawa.
Lizzie Morwick,	Eskridge, Wabaunsee.
Edna Anna Munger,	Manhattan, Riley.
Jacob Michael Murray,	Goff, Nemaha.
Lucy Needham,	Lane, Franklin.
Victor Emanuel Oman,	Leonardville, Riley.
Maurice J. Oteyza,	Manila, *P. I.*
Harold Albert Pennington,	Hutchinson, Reno.
Arthur Alexander Raymond Perrin,	Newton, Harvey.
John Buell Peterson,	Wichita, Sedgwick.
Marcia Pierce,	Junction City, Geary.
Hubert L. Popenoe,	Topeka, Shawnee.
Herman Albert Praeger,	Claflin, Barton.
Edward Richards,	Manhattan, Riley.
James Richards,	Manhattan, Riley.
John A. Richards,	Manhattan, Riley.
Blanche Robertson,	Manhattan, Riley.
Alvertis Santford Salkeld,	Manhattan, Riley.
Clara Dorothy Schild,	Hanover, Washington.
Hugo Schild,	Hanover, Washington.
Jay Warren Simpson,	Talmage, Dickinson.
Grace Smith,	Manhattan, Riley.
Hallie M. Smith,	Manhattan, Riley.
Jay Latimer Smith,	Manhattan, Riley.
Martin G. Smith,	Waverly, Coffey.
Arthur R. Snapp,	Belleville, Republic.
Herbert D. Strong,	Goddard, Sedgwick.
Daniel Charles Sullivan,	Ulysses, Grant.
Leora Juanita Sutcliff,	Mankato, Jewell.
Helen Louise Sweet,	Manhattan, Riley.
Edwin Springer Taft,	Topeka, Shawnee.
Irene Alma Taylor,	Chapman, Dickinson.
Maud E. Teagarden,	Wayne, Republic.
Raymond Charles Thompson,	Manhattan, Riley.
Merritt Rex Tinkham,	Manhattan, Riley.
Bessie L. Tolin,	Soldier, Jackson.
Matilda Trunk,	Caldwell, Sumner.
Elsie May Tulloss,	Ottawa, Franklin.
Harmon J. Twichell,	Salina, Saline.
Carroll Walker,	Frankfort, Marshall.
Daniel Walters,	Manhattan, Riley.
Charles R. Welsh,	Clifton, Washington.
Pauline Emilie Wetzig,	Winkler, Riley.
Charles Julius Willard,	Manhattan, Riley.
Clara Willis,	Manhattan, Riley.
Bruce S. Wilson,	Manhattan, Riley.
Ira A. Wilson,	Winfield, Cowley.
Henry B. Winter,	Manhattan, Riley.
Nelle Wolf,	Manhattan, Riley.
Andrew H. Wright,	Fowler, Meade.
Stuart Smith Young,	Manhattan, Riley.
Asa Calvin Zimmerman,	Moray, Doniphan.

JUNIORS.

Adriano Pablo Alcazar,	Iloilo, *P. I.*
Mollie Aldridge,	Junction City, Geary.
M. Reuben Alleman,	Kansas City, Wyandotte.
Raiffe Alvord,	Manhattan, Riley.
Jessie Edwina Apitz,	Manhattan, Riley.

Name.	Post-office and county (or state).
Ralph Armstrong,	Manhattan, Riley.
Robert Roy Baird,	Riley, Riley.
Harold W. Bales,	Densmore, Norton.
Cecil Pearl Barnett,	Manhattan, Riley.
Angus F. Barry,	Topeka, Shawnee.
Dorus Clark Bascom,	Howard, Elk.
Edward E. Bealey,	Morrill, Brown.
Robert E. Berkeley,	Burr Oak, Jewell.
Roscoe Eugene Blair,	Mulvane, Sumner.
Cool Fenton Blake,	Glasco, Cloud.
Casey C. Bonebrake,	Stockton, Rooks.
Ella V. Brooks,	Tescott, Ottawa.
James C. Browning,	Manhattan, Riley.
Virgil C. Bryant,	Cimarron, Gray.
Fred George Carls,	Clay Center, Clay.
Anna Wilhelmina Carlson,	Manhattan, Riley.
Etta Carlton,	Manhattan, Riley.
Florence Carpenter,	Woodsdale, Stevens.
Clifford H. Carr,	Solomon, Dickinson.
Charles Elmer Cassel,	Manhattan, Riley.
Sarah Elizabeth Cassel,	Manhattan, Riley.
Kirk P. Cecil,	North Topeka, Shawnee.
Edna E. Cockrell,	Oswego, Labette.
Leslie D. Connell,	Altoona, Wilson.
Claude S. Conner,	Lyons, Rice.
Louis Graham Cook,	Effingham, Atchison.
Marie Coons,	Manhattan, Riley.
Margaret Copley,	Manhattan, Riley.
Reva Violet Cree,	Manhattan, Riley.
Don A. Crowther,	Douglass, Butler.
Herman L. Cudney,	Belpre, Edwards.
James Scott Daniels,	Jamestown, Cloud.
Leon Milhame Davis,	Cave, Gray.
Mabel Ethel Davison,	Michigan Valley, Osage.
Ruby Fae Deaver,	Esbon, Jewell.
Lulu Holmes Docking,	Manhattan, Riley.
Ruth E. Elliot,	Manhattan, Riley.
Emmett Emslie,	Manhattan, Riley.
William L. Enfield,	Wichita, Sedgwick.
Wilma Dette Evans,	Colby, Thomas.
Leo Lester Felps,	Le Roy, Coffey.
Marie Fenton,	Neenah, *Wisconsin.*
Frank E. Ferris,	Osage City, Osage.
Louise L. Fielding,	Manhattan, Riley.
Donald Foote,	Simpson, Mitchell.
Minnie L. Forceman,	Vliets, Marshall.
Jesse Foster,	Manhattan, Riley.
Ambrosia Gison,	Iloilo, Panay, *P. I.*
William Holman Goldsmith,	Acme, Dickinson.
Chester W. Grizzell,	Claflin, Barton.
Gabriel Grosfield,	Willis, Brown.
Samuel S. Gross,	Abilene, Dickinson.
Paul D. Guy,	Winfield, Cowley.
Charles Myers Haines,	Manhattan, Riley.
James Howard Hamilton,	Clifton, Washington.
Harry T. Hamler,	Manhattan, Riley.
Ralph Robert Hand,	Wellington, Sumner.
Anton Hanson,	Jamestown, Cloud.
James William Harner,	Manhattan, Riley.
Fritz F. Harri,	Brookville, Saline.
Annie A. Harrison,	Jewell, Jewell.

Name.	Post-office and county (or state).
Ella Hathaway,	Mankato, Jewell.
Grace Hawkins,	Marysville, Marshall.
Stella Hawkins,	Marysville, Marshall.
Lawrence Glenn Haynes,	Glasco, Cloud.
Alice Mabel Hazen,	Centralia, Nemaha.
Christine M. Heim,	Lincoln, Lincoln.
Geneva L. Henderson,	Topeka, Shawnee.
Thomas Newton Hill,	Elk Falls, Elk.
Jesse T. Hirst,	Hutchinson, Reno.
Erwin Burr Hockens,	Arrington, Atchison.
Louise Hoffman,	Topeka, Shawnee.
Vera E. Holloway,	Yates Center, Woodson.
Alice B. Holmstead,	Manhattan, Riley.
Faye Eleanor Houser,	Oxford, Sumner.
Mabel Howell,	Manhattan, Riley.
George Hower, jr.,	Sylvan Grove, Lincoln.
Grace Gertrude Hull,	Manhattan, Riley.
Wyllys Lyman Hull,	Manhattan, Riley.
Harley Main Hunter,	Kansas City, Wyandotte.
Oliver William Hunter,	Blue Rapids, Marshall.
Archie Edward Immenschuh,	Wamego, Pottawatomie.
Emma Sophia Irving,	Baker, Brown.
William H. Irving,	Baker, Brown.
Benjamin David Jeffs,	Hutchinson, Reno.
Edna Mary Jones,	Manhattan, Riley.
Elmer W. Jones,	Elk Falls, Elk.
Ursa Joslin,	Randall, Jewell.
Leslie Eldon Joss,	Fairview, Brown.
Margaret Justin,	Manhattan, Riley.
Nobuzo Kawai,	Manhattan, Riley.
Actea Kennedy,	Topeka, Shawnee.
Harry E. Kiger,	Burlington, Coffey.
Loyd L. King,	Wichita, Sedgwick.
Carl L. Kipp,	Piqua, Woodson.
Mattie Eunice Kirk,	Bazaar, Chase.
Elmer Kiser,	Sedgwick, Harvey.
Albert G. Kittell,	McPherson, McPherson.
Amanda C. Kittell,	McPherson, McPherson.
David Kratzer,	Mitchell, Rice.
Edison Frank Kubin,	McPherson, McPherson.
Florence Laman,	Osborne, Osborne.
David Ernest Lewis,	Independence, Montgomery.
Joe Grigsby Lill,	Mount Hope, Sedgwick.
William Ljungdahl,	Manhattan, (Geary).
Ed. A. Logan,	Manhattan, Riley.
Lillian May Lowrance,	Thayer, Neosho.
John Wallace Lumb,	Wakefield, Clay.
Charles Wilbur McCampbell,	Manhattan, Riley.
Gertrude Muriel McCheyne,	Manhattan, Riley.
John E. McCoy,	Cawker City, Mitchell.
J. Myron McCray,	Manhattan, Riley.
Mabel Mortier McKenzie,	Solomon, Dickinson.
Preston Essex McNall,	Gaylord, Smith.
Sam A. McWilliams,	Morrowville, Washington.
Robert A. Macnab,	Manhattan, Riley.
John Edward Martin,	Waverly, Coffey.
Chalmer A. Mather,	Manhattan, Riley.
F. Herman Mayer,	Alta Vista, Wabaunsee.
Vincent Mecke,	Anness, (Kingman).
Peter J. Meenen,	Clifton, (Clay).
Louis B. Mickel,	Soldier, Jackson.

Name.	Post-office and county (or state).
Francis Burzley Milliken,	Hill City, Graham.
Claude Moorman,	Burr Oak, Jewell.
Grace Morris,	Kansas City, Wyandotte.
Effie May Morrow,	Blue Rapids, Marshall.
Margaret Ethel Moseley,	Alma, Wabaunsee.
Rudolph B. Nelson,	Osage City, Osage.
Franklin W. Newacheck,	El Dorado, Butler.
Guy D. Noel,	Valencia, Shawnee.
John W. Norlin,	Windom, McPherson.
Victor F. Oblefias,	Lucban, Fayabas Prov., *P. I.*
John Francis O'Connor,	Hartford, Lyon.
Myrtle Oskins,	Manhattan, Riley.
Arthur J. Ostlund,	Clyde, Washington.
Charles Harold Paddock,	West Claremont, *N. H.*
Rennick Rubenell Paine,	Manhattan, Riley.
James Oliver Parker,	Lakin, Kearny.
Frank Thomas Parks,	Manhattan, Riley.
M. Wasmuth Parrish,	Atlanta, Cowley.
John Howard Paine,	Randall, Jewell.
Vernon Peachey,	Darlow, Reno.
Claro Pendon,	Iloilo, *P. I.*
Cyrus Arthur Perry,	Greenleaf, Washington.
Arthur Benjamin Pincomb,	Merriam, Johnson.
Lulu Moore Porter,	Holton, Jackson.
Leaffa Laura Randall,	Manhattan, Riley.
Harold S. Records,	Manhattan, Riley.
Ernest Carl Reed,	Glen Elder, Mitchell.
Guy Chester Rexroad,	Partridge, Reno.
Ida Ethel Rigney,	Manhattan, Riley.
Eugene Ruede,	Manhattan, Riley.
Lynnie Sandborn,	Jewell, Jewell.
George Arthur Savage,	Meredith, Cloud.
Albert Leslie Schell,	Wichita, Sedgwick.
Minnie Schorer,	Clyde, Cloud.
Kathleen Selby,	Manhattan, Riley.
August W. Seng,	Salina, Saline.
Malcolm C. Sewell,	Hastings, *Nebraska.*
William Lenley Shelly,	Atchison, Atchison.
Esther Metta Sieder,	Enterprise, Dickinson.
Elva Lucretia Sikes,	Leonardville, Riley.
Zenorah Sim,	Topeka, Shawnee.
Claude W. Simpson,	Cawker City, Mitchell.
Myrtle Simpson,	Talmage, Dickinson.
Alice Skinner,	Topeka, Shawnee.
Mabel Skinner,	Belvue, Pottawatomie.
Roy E. Spriggs,	Little River, Rice.
Effie Eleanor Steele,	Minneapolis, Ottawa.
Clifton J. Stratton,	Kansas City, Wyandotte.
L. A. Sturgis,	Sterling, Comanche.
Randall E. Talley,	Overbrook, Osage.
George Ira Thatcher,	Great Bend, Barton.
Nellie L. Thompson,	Manhattan, Riley.
Earle Thurston,	Manhattan, Riley.
Jean G. Troutman,	Comiskey, Lyon.
Edwin Earl Truskett,	Caney, Montgomery.
Lonnie F. Vass,	Glasco, Cloud.
Ray Thurman Wells,	Parsons, Labette.
Alberta M. Wenkheimer,	Belpre, (Pawnee).
Lura Angeline Wharton,	Topeka, Shawnee.
Burton H. Wilber,	Manhattan, Riley.

Name.	Post-office and county (or state).
Roy Wilkins,	Burden, Cowley.
Francis Buckner Williams,	Lincolnville, Marion.
Marie Williams,	Newton, Harvey.
Marion Williams,	Barnes, Washington.
Chloe May Willis,	Manhattan, Riley.
Floyd E. Wilson,	Soldier, Jackson.
Frances Odell Wilson,	Ingalls, Gray.
Robert Wilson,	Miltonvale, Cloud.
Albert Lemont Wiltse,	Covert, Osborne.
Frederick William Winter,	Dover, Shawnee.
Georgia Withington,	Manhattan, Riley.
Ward Woody,	Cawker City, Mitchell.
Roy Milton Wyatt,	Atchison, Atchison.
Carrie York,	Dunlap, Morris.
James Walter Zahnley,	Dwight, Morris.

SOPHOMORES.

Martha Lee Abshire,	Manhattan, Riley.
Fred T. Alderson,	Burden, Cowley.
Winifred Lois Alexander,	Manhattan, Riley.
Nora Grace Aley,	Cedar Vale, Chautauqua.
Harold H. Amos,	Manhattan, Riley.
Aaron E. Anderson,	Eskridge, Wabaunsee.
Isabella C. Arnott,	Blue Rapids, Marshall.
Eppa Cleveland Ausherman,	Elmont, Shawnee.
Will David Austin,	Isabel, Barber.
Benjamin B. Baird,	Riley, Riley.
Harry S. Baird,	Marquette, McPherson.
James Martin Baker,	Fairport, Ellis.
Stella Louise Ballard,	Washington, Washington.
Amy Estelle Banker,	Overbrook, Osage.
Harry Penock Bates,	Topeka, Shawnee.
John Harrison Bender,	Highland, Doniphan.
James W. Benner,	Manhattan, Riley.
Willis Ernest Berg,	Cleburne, Riley.
Ray Berger,	Sylvan Grove, Lincoln.
Grace Berry,	Topeka, Shawnee.
Karl S. Bingham,	Junction City, Geary.
Hazel E. Bixby,	Manhattan, Riley.
Warren Lale Blizzard,	McPherson, McPherson.
Thomas Paul Bottiger,	Highland, Doniphan.
Florence Bower,	Manhattan, Riley.
Harley James Bower,	Eureka, Greenwood.
Robert Gould Boyd,	Elmo, Dickinson.
Gladys Anita Boyle,	Topeka, Shawnee.
Fred S. Bradford,	Concordia, Cloud.
Roscoe Arthur Branson,	Belleville, Republic.
G. Homer Brown,	Wichita, Sedgwick.
George Wiley Brown,	Ellsworth, Ellsworth.
W. Van Buck,	Oskaloosa, Jefferson.
Bertha Bull,	Manhattan, Riley.
John W. Bullard,	Bellaire, Smith.
Eben Burrough,	Kansas City, *Missouri.*
Maye Burt,	Eureka, Greenwood.
Glenn A. Bushey,	Abilene, Dickinson.
Ralph Morris Caldwell,	Wichita, Sedgwick.
Paul Calvin,	Manhattan, Riley.
Ruth Calvin,	Manhattan, Riley.
Albert Carlson,	Blue Rapids, Marshall.

Name.	Post-office and county (or state).
John R. Carnahan,	Manhattan, Riley.
Nannie Carnahan,	Stockdale, Riley.
Henry W. Carr,	Topeka, Shawnee.
Ben. T. Chaney,	Adrian, Jackson.
Robert Vernon Christian,	Iola, Allen.
Theodore Lea Citizen,	Mulvane, Sumner.
Thomas E. Clarke,	Manhattan, Riley.
Lillian Clemmons,	Osborne, Osborne.
Leonard L. Clifton,	Manhattan, Riley.
Ethel R. Coffman,	Manhattan, Riley.
Joseph H. Coffman,	Manhattan, Riley.
Earle Albert Cole,	Manhattan, Riley.
Bernard Collister,	Minneapolis, Ottawa.
Harry Colwell,	Leonardville, Riley.
John M. Coons,	Manhattan, Riley.
Cecil Willis Creel,	Manhattan, Riley.
Oscar C. Crouse,	Harlan, Smith.
Ida Myrtle Crow,	Kinsley, Edwards.
Charles Irwin Dague,	Holton, Jackson.
Ivon la Vergne Dallas,	Parker, Linn.
Frank Davis,	Topeka, Shawnee.
Susan Davis,	Arkalon, Seward.
Wilbur Sumner Davison,	Michigan Valley, Osage.
Glenn Ananias Dawes,	Asherville, Mitchell.
Charles Arthur Day,	Onaga, Pottawatomie.
Evard A. Dean,	Manhattan, Riley.
Edgar Hamilton Dearborn,	Manhattan, Riley.
Harlan Deaver,	Sabetha, Nemaha.
Mabel Caroline Deibler,	Manhattan, Riley.
Vinton V. Detwiler,	Jewell, Jewell.
Leslie J. Dixon,	Bison, Rush.
William Droge,	Seneca, Nemaha.
Leila Dunton,	Lebanon, Smith.
Philip R. Dunton,	Lebanon, Smith.
Martin Dupray,	Ash Valley, Pawnee.
Margaret Camoren Eastland,	Russell, Russell.
J. Fred Eden,	Hutchinson, Reno.
Earl Lewis Edwards,	Phillipsburg, Phillips.
Navarre H. Edwards,	Russell, Russell.
Ross C. Egy,	Langdon, Reno.
Katherine Lucy Emslie,	Manhattan, Riley.
Asbury Endacott,	Kansas City, Wyandotte.
Francis Lewellyn Engelhardt,	Padonia, Brown.
Maude Estes,	Manhattan, Riley.
Ralph Waldo Evans,	Manhattan, Riley.
Arthur Eugean Fairman,	Manhattan, Riley.
Eugenia Fairman,	Manhattan, Riley.
Rena Amelia Faubion,	Oskaloosa, Jefferson.
Christine Faye Ferguson,	Kansas City, Wyandotte.
Harlow Ferguson,	Zeandale, (Wabaunsee).
Raymond D. Fink,	Formoso, Jewell.
John M. Fisher,	Cedar Vale, Chautauqua.
Lucile Mabel Forest,	Thayer, Neosho.
Robert James Frierson,	Fort Smith, *Arkansas*.
Clarence Griffing Fry,	Manhattan, Riley.
Carrie M. Gates,	Asherville, Mitchell.
Raymond E. Gates,	Anthony, Harper.
Gilbert G. Ghormley,	Partridge, Reno.
John Gingery,	Haddam, Washington.
Amos H. Gish,	Manhattan, Riley.

Name.	Post-office and county (or state).
Vet D. Goodwin,	Abilene, Dickinson.
Harold William Gore,	Raymore, *Missouri.*
Ardi M. Graham,	Topeka, Shawnee.
Fred Foster Greeley,	Manhattan, Riley.
Benjamin Harrison Hake,	Wichita, Sedgwick.
Barret L. Halderman,	Long Island, Phillips.
Thomas Hall,	St. John, Stafford.
Harry W. Hanson,	Clay Center, Clay.
Hiram Barco Harmon,	Valley Falls, Jefferson.
Ervin Harold,	Manhattan, Riley.
Carrie Olive Harris,	Manhattan, Riley.
Floyd Harrison,	Conway, McPherson.
Ida F. Hassebroek,	Manhattan, Riley.
F. Otto Hassman,	Manhattan, Riley.
Charles Appleton Hazzard,	Maplehill, Wabaunsee.
Helen Henderson,	Topeka, Shawnee.
Thomas Elliot Henry,	Meade, Meade.
Ida Viola Hepler,	Manhattan, Riley.
Jestie Lovinia Hepler,	Manhattan, Riley.
Orlean May Hepworth,	Burlingame, Osage.
Harry Ellis Hershey,	Whitewater, Butler.
Harry H. Hill,	Manhattan, Riley.
Rees William Hillis,	Reading, Lyon.
Karl William Hofer,	Manhattan, Riley.
Ward Hollis,	Whiting, Jackson.
William Avery Hopper,	Manhattan, Riley.
Archie L. Horton,	Topeka, Shawnee.
William Adric Hosick,	Yates Center, Woodson.
DeForest Hungerford,	Randolph, Riley.
Esther Lillie Hungerford,	Manhattan, Riley.
Ralph E. Hunt,	Marysville, Marshall.
William W. Hunt,	Blue Rapids, Marshall.
Mildred Huse,	Manhattan, Riley.
Clyde Hussey,	Glasco, Cloud.
Carl D. Irwin,	Salina, Saline.
Helen Emma Iversen,	Hartford, Lyon.
Jessie Jenkins,	Council Grove, Morris.
John Ethbert Jenkins,	Manhattan, Riley.
Harry C. Jennings,	Oswego, Labette.
Benjamin Olaf Johnson,	Wichita, Sedgwick.
Roy Mentzer Johnson,	Mankato, Jewell.
Ethel M. Justin,	Manhattan, Riley.
Arthur L. Kahl,	Manhattan, Riley.
Elsie Kammeyer,*	Manhattan, Riley.
Jesse A. Keeble,	Coffeyville, Montgomery.
Charles B. Keers,	Oskaloosa, Jefferson.
Ruth Mary Kellogg,	Fay, Russell.
Floyd M. Kelly,	Haviland, Kiowa.
Paul V. Kelly,	McCracken, Rush.
Charles Alterson Kelsall,	Reno, Leavenworth.
Tom Kennett,	Concordia, Cloud.
Margaret T. Keys,	Winchester, Jefferson.
Roy Kilmer,	Gypsum, Saline.
James Carlisle Kimble,	Manhattan, Riley.
Frank Kirgis,	Beloit, Mitchell.
Fred V. Kreamer,	Jewell, Jewell.
Fred Krotzer,	Manhattan, Riley.
Herbert Ross Landes,	Yates Center, Woodson.

* Deceased.

Name.	Post-office and county (or state).
Russell E. Lawrence,	Larned, Pawnee.
Willard W. Lawton,	Denison, Jackson.
Raymond Hill Learned,	Manhattan, Riley.
Mary G. Lecrone,	Chase, Rice.
Emma Lee,	Esbon, Jewell.
Dick Lewallen,	Kansas City, Wyandotte.
Frank Clark Lewis,	Paola, Miami.
John Lewis,	Emporia, Lyon.
Oscar M. Lloyd,	Altoona, Wilson.
Albert R. Losh,	Leon, Butler.
Roland Loyd,	Bendena, Doniphan.
Mabel E. Lungren,	Haviland, Kiowa.
Corabell Irene McBride,	Eudora, Douglas.
Vern Allen McCall,	Manhattan, Riley.
John C. McCanles,	Lincoln, Lincoln.
John R. McClung,	Jewell, Jewell.
Cyrus B. McClurg,	Valley Falls, Jefferson.
Walker M. McColloch,	Anthony, Harper.
Fred A. McComb,	Alma, Wabaunsee.
Mary Izetta McCoy,	Cawker City, Mitchell.
Minnie Vergie McCray,	Manhattan, Riley.
Mabel McDonald,	Manhattan, Riley.
John E. McDowell,	Hymer, Chase.
Walter Scott McKay,	Independence, Montgomery.
Clyde McKee,	Manhattan, Riley.
Martha Mae MacLeod,	Valley Falls, Jefferson.
Karl C. Manny,	Winfield, Cowley.
Charles L. Manshardt,	Manhattan, Riley.
John Z. Martin,	Kansas City, Wyandotte.
Roy D. Martin,	Glasco, Cloud.
Roy Masheter,	Sabetha, Nemaha.
Edgar H. May,	Holton, Jackson.
John M. May,	Minneapolis, Ottawa.
Nellie May,	Manhattan, Riley.
Nathan Melbert,	Gypsum, Saline.
Lester O. Mellor,	Almena, Norton.
John Rutherford Minis,	Manhattan, Riley.
Jesse C. Mitchel,	Manhattan, Riley.
Martha Emma Mitchel,	Manhattan, Riley.
Robert A. Mitchel,	Winchester, Jefferson.
Celia Caroline Moore,	Manhattan, Riley.
Charles Bela Moore,	Manhattan, Riley.
Elijah Haywood Moore,	Manhattan, Riley.
William David Moore,	Idana, Clay.
Bessie Moorman,	Burr Oak, Jewell.
Hurd T. Morris,	Manhattan, Riley.
Robert Clay Moseley,	Alma, Wabaunsee.
Harold H. Munger,	Manhattan, Riley.
Mymie Myers,	Manhattan, Riley.
Roy M. Myers,	Manhattan, Riley.
Charles Myszka,	Garnett, Anderson.
Telie E. B. Nafziger,	Partridge, Reno.
Flora Belle Needham,	Osawatomie, Miami.
Marion Neiman,	Whitewater, Butler.
Ellen E. Nelson,	Randolph, Riley.
James H. Nelson,	Ellsworth, Ellsworth.
Louis Frederick Nelson,	Greenleaf, Washington.
Selma E. Nelson,	Randolph, Riley.
Arthur Newcombe,	Great Bend, Barton.
Glayds Irene Nichols,	Liberal, Seward.

Name.	Post-office and county (or state).
Ida Rose Nonamaker,	Osborne, Osborne.
Lelia Grace Norman,	Topeka, Shawnee.
Edythe O'Brien,	Manhattan, Riley.
Carl Olson,	Lindsborg, McPherson.
Wilma Orem,	Manhattan, Riley.
David Lawerence Orendorff,	Manhattan, Riley.
William Mails Orr,	Manhattan, Riley.
Harry Elmer Overholt,	Jewell, Jewell.
Charles Henry Paine,	Manhattan, Riley.
Hope Olive Palmer,	Geuda Springs, (Cowley).
Thomas Parker,	Minneapolis, Ottawa.
Clayton J. Patterson,	Emporia, Lyon.
Dale Vernon Payton,	Manhattan, Riley.
Carl Everett Pearson,	Tonganoxie, Leavenworth.
Grace Ethel Perkins,	Wamego, Pottawatomie.
Kenneth W. Phillips,	Manhattan, (Pottawatomie).
Charles Beryl Pitman,	Manhattan, Riley.
Robert Platt,	Ætna, Barber.
John Allison Porter,	Manhattan, Riley.
Russell C. Porter,	Manhattan, Riley.
Percy B. Potter,	Kiowa, Barber.
Harold Kenneth Powell,	Powhattan, Brown.
Leo Price,	Manhattan, Riley.
Fred Tunis Rader,	Mayfield, Sumner.
Harvey Rait,	Junction City, Geary.
Charles Ernest Randels,	Anthony, Harper.
Hilie Rannells,	Manhattan, Riley.
Silas Milo Ransopher,	Clyde, Cloud.
John Irvin Redmon,	Overbrook, Osage.
Edgar Reed,	Culver, Ottawa.
Eva Rees,	Topeka, Shawnee.
Eva Mary Reeves,	Manhattan, Riley.
Wray Robert Reeves,	Manhattan, Riley.
Harry W. Reppert,	Valley Falls, Jefferson.
Hugh E. Reppert,	Valley Falls, Jefferson.
Ross Herbert Reynolds,	Gypsum, Saline.
Reuben Rupert Rittenhouse,	Columbus, Cherokee.
Floyd Joe Robbins,	Russell, Russell.
Burgess William Roberts,	Morrill, Brown.
Hugh Robertson,	Highland, Doniphan.
Charles Henry Robison,	Delavan, Morris.
Maybeth Robison,	Manhattan, Riley.
Worth D. Ross,	Manhattan, Riley.
Ernest John Rossman,	Clifton, Washington.
Dave G. Roth,	Whitewater, Butler.
Harold Rowe,	Hill City, Graham.
Matah Schaeffer,	Jewell, Jewell.
John Schlaefli,	Cawker City, Mitchell.
Fred H. Schreiner,	Dorrance, Russell.
Richard Schuppert,	Arrington, Atchison.
Bertha Schwab,	Morganville, Clay.
Walter Scidmore,	Tescott, Ottawa.
Cyrus McDonald Scott,	Arkansas City, Cowley.
George Llewellyn Seaman,	Kansas City, Wyandotte.
Ernest O. Sechrist,	Meriden, Jefferson.
Elizabeth C. Shearer,	Frankfort, Marshall.
Grace Ellen Shelley,	Manhattan, Riley.
Lloyd Hedrick Shepherd,	Hutchinson, Reno.
Theodore Sherrard,	Winfield, Cowley.
Grace K. Shinn,	Jewell, Jewell.

Name.	Post-office and county (or state).
John Shinn,	Conway Springs, Sumner.
Archie James Shirley,	Grantville, Jefferson.
Clara Lois Shofe,	Manhattan, Riley.
William Preston Shuler,	Burrton, Harvey.
Reynold Shuyler,	Sterling, Rice.
Merl Hudson Sims,	Wellsville, Franklin.
Edward Skillman,	Tribune, Greeley.
Edward P. G. Small,	Wichita, Sedgwick.
Richard J. Small,	Anness, Sedgwick.
Alberta Aurelia Smith,	Manhattan, Riley.
Bernard M. Smith,	Silverdale, Cowley.
Catherine Lee Smith,	Pratt, Pratt.
Eads Edward Smith,	Holyrood, Ellsworth.
Harlan D. Smith,	Manhattan, Riley.
Harry Lewis Smith,	Hutchinson, Reno.
Laura May Smith,	Wamego, (Wabaunsee).
Luberta Smith,	Manhattan, Riley.
Calvin Snider,	Mound City, Linn.
Orin Snider,	Abilene, Dickinson.
Robert A. Snider,	Abilene, Dickinson.
Talmage Solt,	Manhattan, Riley.
Edna Grace Soupene,	Manhattan, (Pottawatomie).
Estella Pearl Soupene,	Manhattan, Riley.
Clyde Raymond Stevens,	Humboldt, Allen.
H. Curtis Stinson,	Belleville, Republic.
John Russell Stoker,	Manhattan, Riley.
Walter W. Strite,	Manhattan, Riley.
Matthew Castle Stromire,	Manhattan, Riley.
Alden G. Strong,	Goddard, Sedgwick.
Ross H. Sweet,	Manhattan, Riley.
Harold A. Thackrey,	Kansas City, Wyandotte.
G. Elden Thompson,	Manhattan, Riley.
M. Mabel Thompson,	Garrison, Pottawatomie.
John Tinkham,	Manhattan, Riley.
Leslie O. Tippin,	Winchester, Jefferson.
Charles T. Topping,	Cedar Point, Marion.
Harry Totten,	Haddam, Washington.
Robert Thadious Towler,	Ulysses, Grant.
Cora Trimmer,	Topeka, Shawnee.
Earl Jay Trosper,	Manhattan, Riley.
Grace Irene Tucker,	Manhattan, Riley.
Chester Francis Turner,	Manhattan, Riley.
William Fenwick Turner,	Tonganoxie, Leavenworth.
Blanche Vanderlip,	Manhattan, Riley.
Harry Vanderlip,	Manhattan, Riley.
Roy L. Walthour,	Newton, Harvey.
Clyde Q. Ward,	Wetmore, Nemaha.
Alma Warden,	Lyons, Rice.
Clarence Shont Watson,	Pittsburg, Crawford.
John Earl Watt,	Harper, Harper.
Charles R. Wears,	Manhattan, Riley.
Homer L. Weber,	Clifton, Washington.
Andrew Jefferson Wheeler,	Jefferson, Montgomery.
Clarence Wheeler,	Jefferson, Montgomery.
Eva May Wheeler,	Jefferson, Montgomery.
Glenn B. Wheeler,	Logan, Phillips.
Helen Wheeler,	Logan, Phillips.
Glenn Edwin Whipple,	Olivet, Osage.
Bessie May White,	Manhattan, Riley.
Lantz Merrill Whitford,	Kansas City, Wyandotte.

Name.	Post-office and county (or state).
Willard Ames Whitney,	Manhattan, Riley.
Harrison Walter Wilkinson,	Dwight, Morris.
Clyde Douglas Williams,	Williamsburg, Franklin.
Jennie Williams,	Meriden, Jefferson.
Edna Leona Willis,	Manhattan, Riley.
Esther S. Wilson,	Manhattan, Riley.
John Thomas Wilson,	Winfield, Cowley.
Norman F. Wilson,	Oberlin, Decatur.
Roy M. Wilson,	Concordia, Cloud.
Clara Mary Woestemeyer,	Bethel, Wyandotte.
Ray M. Wolfe,	La Cygne, Linn.
Harry Wood,	Anthony, Harper.
William B. Wood,	Anthony, Harper.
George Wright,	Burlington, Coffey.
Roscoe T. Wright,	Manhattan, Riley.
Harry Millard Ziegler,	Iola, Allen.
Charles L. Zoller,	Kirwin, Phillips.

FRESHMEN.

Francis C. Abbott,	Manhattan, Riley.
Elizabeth Aberle,	Manhattan, Riley.
Nellie Aberle,	Manhattan, Riley.
Effie Adams,	Ozawkie, Jefferson.
Nora Ann Addington,	Fay, Russell.
Zora Alice Addington,	Fay, Russell.
Clarinda Alexander,	Manhattan, Riley.
Roy E. Alexander,	Bucklin, Ford.
William Alexander,	Manhattan, Riley.
Roberta Marie Allin,	Manhattan, Riley.
Russell Allingham,	Manhattan, Riley.
Fayette H. Allis,	Manhattan, Riley.
Esther Almgren,	Manhattan, Riley.
Bernard Anderson,	Hiawatha, (Doniphan).
H. Rea Anderson,	Manhattan, Riley.
John H. Anderson,	Lebanon, Smith.
Fred Ansdell,	Jamestown, Cloud.
Ray Cecil Baird,	Manhattan, Riley.
Thomas J. Baird,	Manhattan, Riley.
Arthur Baker,	Solomon Rapids, Mitchell.
Nellie M. Baker,	Marvin, Phillips.
Orville L. Baker,	Manhattan, Riley.
Inez Balfour,	Ford, Ford.
Walter Ransom Ball,	Anthony, Harper.
Wesley Barkemeyer,	Sedgwick, Harvey.
William A. Barr,	Harper, Harper.
George Earnest Bartholomees,	Kansas City, *Missouri.*
Ellen Margaret Batchelor,	Manhattan, Riley.
Ruth Haller Bates,	Manhattan, Riley.
Myrtle Ruth Bayles,	Manhattan, Riley.
Albert Smith Bell,	Manhattan, Riley.
Lillie Bergman,	Manhattan, Riley.
Gilbert W. Berry,	Lancaster, Atchison.
Russell Bills,	Manhattan, Riley.
George Edward Bircher,	Cairo, Pratt.
Glenn R. Blain,	Manhattan, Riley.
Carl Madison Blaine,	Hiawatha, Brown.
Delia C. Blanchard,	Marysville, Marshall.
David George Blattner,	Jetmore, Hodgeman.
George William Blythe,	White City, Morris.

Name.	Post-office and county (or state).
Alexander Thurston Bodle,	Meade, Meade.
Ernest Boettcher,	Winkler, Riley.
Robert M. Bolmer,	Conway Springs, Sumner.
James Burns Bond,	Bala, Riley.
Cynthia Bonebrake,	Stockton, Rooks.
Zella Bonebrake,	Stockton, Rooks.
Ralph Coleman Bowlby,	Fairport, Russell.
Mabel M. Boyd,	Kensington, Smith.
John Hall Bradford,	Monmouth, *Illinois*.
Lawrence E. Brennan,	Maplehill, Wabaunsee.
Ruth Bright,	Manhattan, Riley.
Harrison Broberg,	Vesper, Lincoln.
Mabel M. Broberg,	Vesper, Lincoln.
Edwin H. Brooks,	Tescott, Ottawa.
Charles Elmer Brown,	Manhattan, Riley.
Ira E. Brown,	Sylvan Grove, Lincoln.
Louise Violet Brown,	Eskridge, Wabaunsee.
Ivan Bruce,	Marquette, McPherson.
Fred Brunker,	Manhattan, Riley.
William Brunker,	Manhattan, Riley.
Mary E. Brunner,	Norton, Norton.
Walter August Buchheim,	Winkler, Riley.
Elmer Wilmot Buell,	Miltonvale, Cloud.
Iva Claire Buell,	Manhattan, Riley.
Percy Burnett,	Hymer, Chase.
Mary O. Burr,	Manhattan, Riley.
Carl Balfour Butler,	Manhattan, Riley.
Joseph Lee Byram,	Cedar Point, Chase.
Frank Griswold Campbell,	Manhattan, Riley.
George Lewis Campbell,	Bushong, Lyon.
James William Campbell,	Topeka, Shawnee.
Oscar Canary,	Fall, Leavenworth.
Georgia Canfield,	Belleville, Republic.
Robert Russell Cave,	Manhattan, Riley.
Ralph Blake Chapin,	Green, Clay.
Ralph Brower Chapman,	Muscotah, Atchison.
Julia Eleanor Cheney,	Great Bend, Barton.
Clifton W. Clark,	Pratt, Pratt.
Ernest Herbert Clark,	Linn, Washington.
Stanley Clark,	Manhattan, Riley.
David Charles Clarke,	Manhattan, Riley.
Eva M. Clifton,	Manhattan, Riley.
Frank Cockrell,	Oswego, Labette.
Laura Cockrell,	Oswego, Labette.
Roy David Coleman,	Denison, Jackson.
Lota May Cooper,	Manhattan, Riley.
Ray F. Cooper,	Wichita, Sedgwick.
James Wesley Crooks,	Beattie, Marshall.
George Samuel Croyle,	New Cambria, Saline.
Forrest Virgil Curtis,	Goddard, Sedgwick.
Ward Webster Curtis,	Lenora, Norton.
Nellie Custer,	Manhattan, Riley.
Ruby B. Custer,	Manhattan, Riley.
Tom J. Darrah, jr.,	McPherson, McPherson.
Earl Davidson,	Yates Center, Woodson.
Fred Perry Day,	Allen, Lyon.
James Eugene Decker,	Jamestown, Cloud.
Elizabeth Dee,	Russell, Russell.
Glen DeGarmo,	Naron, Pratt.
Urfa A. Domsch,	Galva, McPherson.

Name.	Post-office and county (or state).
J. Mary Dow,	Manhattan, Riley.
Florence Drake,	Zion City, *Illinois*.
Hallie Caroline Drake,	Manhattan, Riley.
Lulu Irene Drake,	Manhattan, Riley.
Cora M. Drown,	Manhattan, Riley.
Homer Drum,	Waverly, Coffey.
Hal B. Dubois,	Burlingame, Osage.
Leo E. Duehn,	Clements, Chase.
Samuel Duffield,	Manhattan, Riley.
Howard M. Dukelow,	Hutchinson, Reno.
George Edward Dull,	Washington, Washington.
Goldie Georgia Eagles,	Assaria, Saline.
Mary Belle Edelblute,	Keats, Riley.
Ernest R. Einsel,	Cimarron, Gray.
Frederick D. Elliott,	Manhattan, Riley.
W. A. Ellis,	Manhattan, Riley.
Abner Ethan Engle,	Abilene, Dickinson.
Floyd Oliver Ergenbright,	Independence, Montgomery.
Ned Bluford Estes,	Stafford, Stafford.
Osier Verne Estes,	Manhattan, Riley.
Ada Elizabeth Evans,	Manhattan, Riley.
Bonnie Evans,	Manhattan, Riley.
Robert Arthur Evans,	Liberal, Seward.
Katherine Fanska,	Americus, Lyon.
Lizzie Fanska,	Americus, Lyon.
Harry Albert Fearey,	Anness, Sedgwick.
Herman G. Feitz,	Hays, Ellis.
Lloyd Lester Ferguson,	Manhattan, Riley.
M. Maude Fisher,	Cedar Vale, Chautauqua.
Elizabeth May Fitzgerald,	Kiowa, Barber.
Victor Florell,	Jamestown, Republic.
Nina B. Foltz,*	Manhattan, Riley.
Charles Earl Foresman,	Manhattan, Riley.
Harry A. Geauque,	Manhattan, Riley.
Richard William Getty,	Downs, Osborne.
J. Scott Gilleece,	Mayetta, Jackson.
Charlote E. Gledhill,	Portis, Osborne.
John H. Goheen,	Manhattan, Riley.
Mabel Maye Gonterman,	Manhattan, Riley.
Lee H. Gould,	Dodge City, Ford.
Edna Jane Grandfield,	Wichita, Sedgwick.
Edwin Harrison Grandfield,	Wichita, Sedgwick.
Vernon L. Grant,	Emporia, Lyon.
Laura Graves,	Clifton, Washington.
David D. Gray,	Topeka, Shawnee.
Marcus F. Gray,	Woodsdale, Stevens.
Lewellen G. Griffing,	Topeka, Shawnee.
William Henry Grinter,	Perry, Jefferson.
Blanche W. Groome,	Manhattan, Riley.
S. Lelia Groome,	Manhattan, Riley.
Lottie Gugenhan,	May Day, Riley.
Simpson Floyd Hacker,	Atwood, Rawlins.
Otto C. Hagans,	Utica, (Lane).
Earl Livingston Hageman,	Clifton, Washington.
Lilian Hale,	Kansas City, Wyandotte.
George David Hamar,	Howard, Elk.
Lewis A. Hammers,	Clearwater, Sedgwick.
Grace Lorena Hammond,	Manhattan, Riley.

* Deceased.

Name.	Post-office and county (or state).
Mabel Rea Hammond,	Manhattan, Riley.
Ruth Hammond,	North Topeka, Shawnee.
Huldah E. Hanson,	Marquette, McPherson.
Henry H. Harbecke,	Whiting, Jackson.
Estel Arthur Harcourt,	Rock, Cowley.
Richard Harris,	Manhattan, Riley.
Marguerite Hartwig,	Goodland, Sherman.
Harold H. Haskin,	Frankfort, Marshall.
Arthur Raymond Hawkes,	Banner, Trego.
Ledru R. Healy,	Manhattan, Riley.
Will H. Healy,	Tyrone, *Oklahoma.*
William Lauren Heard,	Dodge City, Ford.
William Hemphill,	Pratt, Pratt.
Charles Hennon,	Morrowville, Washington.
Inez V. Hepler,	Manhattan, Riley.
Bertha Hewson,	Larned, Pawnee.
Charles William Hickok,	Ulysses, Grant.
Nellie Marguerite Hickok,	Ulysses, Grant.
Robert R. Hickson,	Conway Springs, Sumner.
Reuben Hokanson,	Marquette, McPherson.
Leonard Joseph Hole,	Manhattan, Riley.
Walter Hole,	Manhattan, Riley.
Rollie Cleal Holmes,	Hill City, Graham.
Oscar Stephen Holroyd,	Hewins, Chautauqua.
William B. Honska,	Lost Springs, Marion.
Fred Hopper,	Manhattan, Riley.
Joe Hopper,	Manhattan, Riley.
Arthur Justus Hotte,	Manhattan, Riley.
Edgar Houk,	Americus, Lyon.
Melissa Marie Howell,	Manhattan, Riley.
Irwin V. Howenstine,	Manhattan, Riley.
Hubert Hudson,	Fredonia, Wilson.
Clara Louise Hughes,	Topeka, Shawnee.
D. Ray Hull,	Manhattan, Riley.
Ruth Hull,	Manhattan, Riley.
Clarence A. Hulse,	Meriden, Jefferson.
Clara Hungerford,	Randolph, Riley.
George E. Hungerford,	Manhattan, Riley.
Laura Belle Hughes,	Manhattan, Riley.
Mulford Hutchinson,	Burden, Cowley.
Mary Mell Hutto,	Manhattan, Riley.
Aldie P. Immenschuh,	Manhattan, Riley.
Irving Ingraham,	Manhattan, Riley.
Mildred Lee Inskeep,	Manhattan, (Pottawatomie).
Alva Dee Jackman,	Lincoln, Lincoln.
Charles Burton Jared,	Arkansas City, Cowley.
Fleta Cecille Jefferson,	Buffalo, Wilson.
John C. Jenkins,	Leonardville, Riley.
Harrie L. Jennison,	Farnsworth, Lane.
Fern Jessup,	Merriam, Johnson.
C. E. Arthur Johnson,	Healy, Gove.
Charles P. Johnson,	Independence, Montgomery.
Edward Hurd Johnson,	Manhattan, Riley.
Marie Johnson,	Wichita, Sedgwick.
Waldo Harold Johnson,	White City, Morris.
Robert C. Johnston,	Adams, Kingman.
Bertha Jolley,	Manhattan, Riley.
Jennie Jones,	Plymouth, Lyon.
Emma Dorothy Kammeyer,	Manhattan, Riley.
Clarence Kaser,	Cedar Vale, Chautauqua.

Name.	Post-office and county (or state).
Clarence Edward Kellogg,	Manhattan, Riley.
Willis Norton Kelly,	Hutchinson, Reno.
George Kernohan,	Manhattan, Riley.
Ray Kiene,	Valencia, Shawnee.
Horace S. King,	Glasco, Cloud.
Minnie Luella King,	Lexington, Clark.
Elmer Frederic Kittell,	Topeka, Shawnee.
Richard Arthur Kneeland,	Wakefield, Clay.
Elgie A. Kubin,	McPherson, McPherson.
Ray Delbert Laflin,	Goffs, Nemaha.
Edward Larson,	Vesper, Lincoln.
Robert Gould Larzelere,	Wathena, Doniphan.
Hilmer H. Laude,	Rose, Woodson.
Martin L. Laude,	Rose, Woodson.
Rushton D. Laughlin,	Garden City, Finney.
Frank Baxter Lawton,	Newton, Harvey.
Grover Lee,	Pratt, Pratt.
Fairy Lightfoot,	Manhattan, Riley.
Lena Lindeman,	Formoso, Jewell.
Charles James Lindsay,	Manhattan, Riley.
Elva M. Lindsay,	Grantville, Jefferson.
M. Eva Linn,	Otis, Rush.
Charles Lipperd,	Oxford, Sumner.
Ernest Edwin Lloyd,	Altoona, Wilson.
Sewell Lofinck,	Manhattan, Riley.
Annie Elizabeth Logan,	Maplehill, Wabaunsee.
Dola Violet Logback,	Randolph, Riley.
Clyde Ludington,	Manhattan, Riley.
John Barlow Lund,	Manhattan, Riley.
Joseph G. Lundholm,	Osage City, (Lyon).
DeNell Gilbert Lyon,	Manhattan, Riley.
Lorenza Lloyd McAninch,	Manhattan, (Pottawatomie)
Lottie McCammon,	Manhattan, Riley.
Spencer English McCoy,	Wilder, Johnson.
Viva Margaret McCray,	Manhattan, Riley.
Irene Sophia McCreary,	Manhattan, Riley.
Edwin McDonald,	Abilene, Dickinson.
Bert J. McFadden,	Stafford, Stafford.
Homer B. McFadden,	Maize, Sedgwick.
Clayton Alexander McIntosh,	Washington, Washington.
Harold F. McKee,	Havensville, Pottawatomie.
Nina Alice McKee,	Burlington, Coffey.
Charles Curtis McKirahan,	Topeka, Shawnee.
Arthur Earl McNeil,	Centralia, Nemaha.
Daniel G. Mahon,	Clyde, Cloud.
Ralph Manly,	Manhattan, Riley.
Kenneth R. March,	Manhattan, Riley.
Joseph Francis Marron,	Ogden, Riley.
Gifford Leslie Marrs,	Arrington, Atchison.
Claude Marshall,	Clifton, Washington.
Elmer E. Martin,	Ottawa, Franklin.
George May,	New Cambria, Saline.
Fred Christian Maybach,	Great Bend, Barton.
Mabel Mayhew,	Belpre, Edwards.
Everett L. Meldrum,	Cedar Vale, Chautauqua.
Clarence Miller,	Independence, Montgomery.
Dwight Logan Miller,	Manhattan, Riley.
Harold Gibson Miller,	Ada, Ottawa.
Ralph Leroy Miller,	Eureka, Greenwood.
Fred Lawrence Minx,	Lincoln, Lincoln.

Name.	Post-office and county (or state).
Gail Vanfossin Mitchell,	Herington, Dickinson.
Harry Clifford Mitchell,	Hymer, Chase.
Ida Eugenia Moffatt,	Manhattan, Riley.
George M. Moore,	Manhattan, Riley.
Howard Leon Morehead,	Wichita, Sedgwick.
Margaret Morris,	Manhattan, Riley.
Maria Morris,	Manhattan, Riley.
William A. Moss,	Lincoln, Lincoln.
Dennis F. Mossman,	Maplehill, Wabaunsee.
Carl S. Multer,	Haddam, Washington.
Myra May Munger,	Manhattan, Riley.
Charles Murphy,	Halstead, Harvey.
Karl Bryant Musser,	Acme, Dickinson.
Lester E. Myers,	Belleville, Republic.
Velma Pearl Myers,	Manhattan, Riley.
Orville Nauman,	Frankfort, Marshall.
Florence Estelle Needham,	Osawatomie, Miami.
James W. Nevins,	Blue Rapids, Marshall.
Jessie E. Newland,	Bridgeport, Saline.
Floyd Bruce Nichols,	Buffalo, Woodson.
James M. Nicholson,	Scranton, Osage.
J. Arthur Nicolay,	Scranton, Osage.
Josie E. Nicolay,	Scranton, Osage.
Katherine I. Nielson,	Marysville, Marshall.
Laura B. Nixon,	Riley, Riley.
Nellie Florence Nixon,	Manhattan, Riley.
Harry M. Noel,	Valencia, Shawnee.
Lee J. Noftzger,	Anthony, Harper.
Harold Dale O'Brien,	Luray, Russell.
Earl O'Connell,	Kiowa, Barber.
William O'Connell,	Kiowa, Barber.
Helen P. Oesterhaus,	Junction City, Geary.
David Bethel Osburn,	Colwich, Sedgwick.
Dora Marie Otto,	Riley, Riley.
Glenn Decatur Paddleford,	Manhattan, (Pottawatomie).
John W. Parsons,	Sylvan Grove, Lincoln.
Milton Leroy Pearson,	Cawker City, Mitchell.
Dudley B. Pellette,	Hutchinson, Reno.
Clara E. M. Peters,	Washington, Washington.
Arthur Dow Phelps,	Great Bend, Barton.
Ralph William Phenicie,	Reno, Leavenworth.
Henry Vinton Phenis,	Manhattan, Riley.
Edwin W. Pierce,	Bison, Rush.
Amelia Gertrude Pierson,	Manhattan, Riley.
Bertha L. Plumb,	Fairview, Brown.
Henry James Plumb,	Pleasanton, Linn.
Frank Glendon Pollom,	North Topeka, Shawnee.
Ray Hamlin Pollom,	North Topeka, Shawnee.
Chester J. Porter,	Webber, Jewell.
Lena Porter,	Manhattan, Riley.
Harry E. Potter,	Norwich, Kingman.
James J. Price,	Emporia, Lyon.
Maggie Price,	Manhattan, Riley.
William Arthur Pulver,	Mankato, Jewell.
Daniel Milton Purdy,	Arkansas City, Cowley.
Samuel Wesley Pyke,	Detroit, Dickinson.
Iola Grace Rader,	Manhattan, Riley.
Olga Raemer,	Herkimer, Marshall.
Georgia A. Randel,	Lewis, Edwards.
Fred Rathbone,	Manhattan, Riley.

Name.	Post-office and county (or state).
Earle Reaume,	Ellsworth, Ellsworth.
Carl H. Reed,	Centralia, Nemaha.
Raymond Rexroad,	Darlow, Reno.
Harry R. Richardson,	Moline, Elk.
Constance E. Richmond,	Lenora, Norton.
Ralph Ritter,	Spearville, Ford.
Newell Robb,	Neal, Greenwood.
Eph E. Robinson,	Manhattan, Riley.
Frank Robinson,	Morrill, Brown.
Josephine Robinson,	Morrill, Brown.
Walter S. Robinson,	Nashville, Kingman.
Alvena Rohde,	Manhattan, Riley.
Harvey Roots,	Manhattan, Riley.
Franco T. Rosado,	Isabela, Negros, *P. I.*
David S. Rose,	Douglass, Butler.
Fred Ruffner,	Beloit, Mitchell.
Edwin E. Rugg,	Liberal, Seward.
Albert Wilson Rymph,	Harper, Harper.
Norton Sanders,	Osage City, (Lyon).
Minnie Pearl Sanderson,	Marysville, Marshall.
Elsie Helen Schmidler,	Marysville, Marshall.
Roy G. Schrock,	Manhattan, Riley.
Ed. H. Schroer,	Parallel, Riley.
Minnie M. Scott,	Waterville, Marshall.
Leslie Leon Shaw,	Leavenworth, Leavenworth.
Etta Sherwood,	Manhattan, Riley.
Virgie Sherwood,	Manhattan, Riley.
Harry Nelson Shuler,	Manhattan, Riley.
Carrie Marietta Shumway,	Manhattan, Riley.
Edward Leon Sikes,	Leonardville, Riley.
Lewis Anthony Sikes,	Leonardville, Riley.
Mary Edna Simmons,	Burlington, Coffey.
Edith Sitterly,	Manhattan, Riley.
Katie Minnie Sitterley,	Manhattan, Riley.
Harry E. Skinner,	Beverly, Lincoln.
Homer Sloan,	Independence, Montgomery.
Harry C. Smith,	Manhattan, Riley.
Honor Bright Smith,	Clyde, Cloud.
Isaac Newton Smith,	Manhattan, Riley.
Joseph Smith,	Manhattan, Riley.
Ned Smith,	Manhattan, Riley.
Ralph B. Smith,	Manhattan, Riley.
Jonathan K. Snyder,	Altoona, Wilson.
Lester Sommers,	Manhattan, Riley.
Mark Soupene,	Manhattan, Riley.
Whitcomb G. Speer,	Cottonwood Falls, Chase.
Mabel Irene Spencer,	Lecompton, Douglas.
Judd P. Stack,	Topeka, Shawnee.
Frank Leon Stahl,	Auburn, Shawnee.
John Sherman Stauffer,	South Haven, Sumner.
John T. Steele,	Manhattan, Riley.
Edith C. Stenvers,	Manhattan, Riley.
Lottie Geneve Stephenson,	Clements, Chase.
Ross Stockwell,	Havensville, Pottawatomie.
Carl James Stoddard,	Muscotah, Atchison.
Ralph H. Stone,	Winfield, Cowley.
Felicia Goldie Stromire,	Manhattan, Riley.
Etta Stuart,	Manhattan, Riley.
Mabel Greta Stump,	Manhattan, Riley.
Jerry P. Sullivan,	Ulysses, Grant.

Name.	Post-office and county (or state).
Elsie Malvina Swanson,	Manhattan, Riley.
Ollie R. Swanson,	Manhattan, Riley.
Mary Franc Sweet,	Manhattan, Riley.
Leonhardt Swingle,	Manhattan, Riley.
Cassie Lydia Tanner,	Manhattan, Riley.
John Calvin Taylor,	Zenith, Stafford.
Ralph C. Taylor,	Great Bend, Barton.
Ellen Maude Terhune,	Manhattan, Riley.
Grace Terhune,	Manhattan, Riley.
Rudolph Wren Thompson,	Lakin, Kearny.
Jesse H. Thornton,	Manhattan, Riley.
Charles Tisdale,	Russell, Russell.
Harry W. Tobey,	Hope, Dickinson.
Walter Edwin Tomson,	Topeka, Shawnee.
Marianna Toothaker,	Blaine, Pottawatomie.
Tom K. Toothaker,	Blaine, Pottawatomie.
Vernon Roland Trexler,	Bucklin, Ford.
Otho C. Tucker,	Salina, Saline.
James Austin Tuggle,	Powhattan, Brown.
Alberlina Tulloss,	Ottawa, Franklin.
Fred B. Turner,	Frederic, Rice.
Mary Lee Turner,	Manhattan, Riley.
Arthur Unruh,	Pawnee Rock, Barton.
Joe Vale,	Webber, Jewell.
Emma V. Valentine,	Manhattan, Riley.
Ray Vansell,	Muscotah, Atchison.
John A. Vohringer,	Hutchinson, Reno.
Frank H. Walker,	Atwood, Rawlins.
Walter Gilling Ward,	Bird City, Cheyenne.
Lloyd E. Warner,	Fairview, Brown.
Francis Weber,	Monument, Logan.
John Webster,	Carneiro, Ellsworth.
Louis Wermelskirchen,	Manhattan, Riley.
Edgar Westover,	Brownell, Ness.
Florence R. Whipple,	Longford, Clay.
A. Homer Whitney,	Narka, Republic.
Frederic C. Williams,	Hull, Marshall.
Louis Coleman Williams,	Manhattan, Riley.
Owen E. H. P. Williams,	Manhattan, Riley.
Ray F. Williams,	Manhattan, Riley.
Raymond Williams,	Newton, Harvey.
Lloyd D. Willis,	Manhattan, Riley.
Katherine Elizabeth Williston,	Manhattan, Riley.
Elmer W. Wilson,	Turner, Wyandotte.
Helen Winter,	Blue Rapids, Marshall.
Vera K. Winter,	Blue Rapids, Marshall.
Joseph Roy Witmer,	Baileyville, Nemaha.
Harold Pope Wood,	Elmdale, Chase.
(Mrs.) Stella Woodsum,	Manhattan, Riley.
Nellie Lunette Wreath,	Manhattan, (Pottawatomie).
Glenn L. Wycoff,	Conway Springs, Sumner.
Oscar York,	Dunlap, Morris.

SUB-FRESHMEN.

Wilber Scott Acton,	Concordia, Cloud.
Elsie Adams,	Ozawkie, Jefferson.
Howard Aley,	Cedar Vale, (Cowley).
Ruby Aley,	Cedar Vale, (Cowley).
Fred S. Alford,	Lawrence, Douglas.

Name.	Post-office and county (or state).
Ruth Evangeline Allen,	Randolph, Riley.
James Alsop,	Wakefield, Clay.
Algot B. Anderson,	McPherson, McPherson.
Clarence Anderson,	Hartford, Lyon.
Earl Anderson,	Topeka, Shawnee.
Frances May Anderson,	Hartford, (Coffey).
Leonard Adolph Anderson,	Zeandale, Riley.
George S. Ashley,	Pleasanton, Linn.
Fred G. Astrom,	Osage City, Osage.
Mary E. Austin,	Isabel, Barber.
Frances Ayars,	Keats, Riley.
Emery Babb,	Wakefield, Clay.
Ruth Babb,	Wakefield, Clay.
D. Flavius Bachelle[illegible],	Manhattan, Riley.
O. R. Baird,	Manhattan, Riley.
Earl Franklin Baker,	Arkansas City, Cowley.
Oscar Baker,	Solomon Rapids, Mitchell.
Inis V. Barber,	Manhattan, Riley.
Edwin Barnard,	Madison, Greenwood.
George A. Barnard,	Madison, Greenwood.
Robert L. Barnum,	Simpson, Cloud.
Orville Longacre Barry,	Mayfield, Sumner.
William A. Baty,	Bartlett, Labette.
Earl Baughn,	Cedron, Lincoln.
Mabel Evangeline Baxter,	Manhattan, Riley.
William Clyde Baxter,	Thayer, Neosho.
Benjamin Franklin Bayles,	Manhattan, Riley.
John Bayles,	Manhattan, Riley.
Olive Beal,	Valencia, Shawnee.
James Attison Bell,	Ackerland, Leavenworth.
William Thomas Bell,	Oskaloosa, Jefferson.
Winona Frank Bell,	Oskaloosa, Jefferson.
Arthur S. Bennett,	Allison, Decatur.
Arthur Randall Bentley,	Valhalla, Gove.
Edna Almeda Berg,	Cleburne, Riley.
Bessie May Berry,	Lancaster, Atchison.
William H. Best,	Winfield, Cowley.
James Hawes Biddison,	Manhattan, Riley.
Ina Fern Bigger,	Topeka, Shawnee.
Robert M. Blachly,	Leonardville, Riley.
Lena Francise Blackwood,	Idana, Clay.
Rena Ellen Blackwood,	Idana, Clay.
George N. Blain,	Manhattan, Riley.
Charles H. Blake,	Ulysses, Grant.
Earl Milton Blake,	Ulysses, Grant.
Grace Ida Blake,	Ulysses, Grant.
Lawrence John Blythe,	White City, Morris.
Jacob Bohen,	Hope, Dickinson.
Alvin Bolen,	Soldier, Jackson.
Clarence Elmer Boll,	Wilsey, Morris.
William High Bond,	Manhattan, Riley.
Harry W. Bosworth,	Garden City, Finney.
Ray Mose Bovard,	Utica, Ness.
John M. Bowman,	Council Grove, Morris.
William Boyer,	Wilsey, Morris.
Earl L. Bracewell,	Kincaid, Anderson.
James Bradley,	Niles, Ottawa.
Louise Havergal Brady,	Leoti, Wichita.
Homer Ray Brammell,	Ozawkie, Jefferson.
Dio Brenner,	Manhattan, Riley.

Name.	Post-office and county (or state).
Clare Ena Brethour,	Green, Clay.
Lola Edna Brethour,	Green, (Riley).
Harley Brewer,	Goodrich, Linn.
Carl Broberg,	Vesper, Lincoln.
Clarence V. Broberg,	Vesper, Lincoln.
Minnie Maud Browning,	Topeka, Shawnee.
Joseph W. Bruna,	Bremen, Marshall.
Elsie Luella Buchheim,	Winkler, Riley.
Meta Evalina Buck,	Manhattan, Riley.
Hazel Buckman,	Conway, McPherson.
Eliza B. Burkdoll,	Rantoul, Franklin.
Merle Burnett,	Almena, Norton.
Nellie J. Bushong,	Cedar Vale, Chautauqua.
Alpha Vivia Byarlay,	Bala, Riley.
George Caldwell,	Oswego, Labette.
Julia Helen Caldwell,	Oswego, Labette.
Faith Calvin,	Wakefield, Clay.
Grace Calvin,	Wakefield, Clay.
Edvth Campbell,	Meriden, Jefferson.
Jules Verne Campbell,	Topeka, Shawnee.
Plumb D. Carl,	Imperial, Finney.
Howard R. Carpenter,	Council Grove, Morris.
Homer H. Carter,	Fulton, Bourbon.
Raymond Carter,	Minneapolis, Ottawa.
Lillian Josephine Caster,	Manhattan, Riley.
Ralph S. Cecil,	North Topeka, Shawnee.
Bessie H. Chambers,	Milford, Geary.
Goldie M. Chambers,	Milford, Geary.
David Arthur Childears,	Emporia, Lyon.
John H. Christian,	Iola, Allen.
George W. Christie,	Manhattan, Riley.
Charles Paul Clare,	Valley Falls, Jefferson.
Goldie Rebecca Clark,	Hudson, Stafford.
Hazel Clark,	Pratt, Pratt.
Jessie Anna Clark,	Riley, Riley.
Lewis Milton Clark,	Rose, Woodson.
James Bertin Claywell,	Olsburg, Pottawatomie.
Charles Vernon Cochran,	Silver Lake, Shawnee.
Arvilla Coffelt,	Havensville, Pottawatomie.
Merle Dolin Collins,	Wichita, Sedgwick.
Myron Collins,	Wichita, Sedgwick.
George Nelson Collister, jr.,	Manhattan, Riley.
John B. Collister,	Manhattan, Riley.
Alma Irene Comes,	Burrton, Reno.
Aubrey Deakins Conrow,	Manhattan, Riley.
Lena Adelle Conrow,	Manhattan, Riley.
Rose Conway,	Norton, Norton.
William Harvey Cooper,	Stockton, Rooks.
Joseph Beattie Copeland,	Idana, Clay.
Anna Cox,	Kirwin, Phillips.
George D. Cox,	Cummings, Atchison.
George Henry Cox,	Hays, Ellis.
Rossie Louane Cox,	Madison, Greenwood.
Harry R. Crandall,	Newton, Harvey.
Thomas Philip Crist,	Alta Vista, Wabaunsee.
Bessie Crotts,	Woodsdale, Stevens.
Virgil Cunningham,	Manhattan, Riley.
Craig Hood Dallas,	Parker, Linn.
Petrea Christina Dam,	Marysville, Marshall.
George Hilton Daniels,	Luray, Russell.

Name.	Post-office and county (or state)
David Everett Davis,	Cave, Gray.
Floyd Ivan Davis,	Cave, Gray.
Jessie E. Davis,	Manhattan, Riley.
Ruth Esther Dawes,	Asherville, Mitchell.
Gladys Deaver,	Esbon, Jewell.
Mrs. Bessie DeCrow,	Kinsley, Edwards.
Mary Delfs,	Inman, McPherson.
Mathias Dietrich, jr.,	Broughton, Clay.
Victor Pearl Dixon,	Manhattan, Riley.
Lenora Kathryn Doane,	Manhattan, Riley.
William M. Docking,	Manhattan, Riley.
Paul Girard Donnel,	Auburn, Shawnee.
Dora Douglass,	Athol, Smith.
John Drown,	Manhattan, Riley.
Vera Belle Dugger,	Morganville, Clay.
Harold Dunn,	Olpe, Lyon.
Edwin R. Dunton,	Lebanon, Smith.
Alpha Durrett,	Manhattan, Riley.
Charles Wesley Durrett,	Manhattan, Riley.
Mollie Elizabeth Eagles,	Assaria, Saline.
Myron F. Eddy,	Ingalls, Gray.
G. DeWitt Elder,	Augusta, Butler.
James Cyrus Ryan Elliott,	Linn, Washington.
Richard J. Ellis,	Stockdale, Riley.
Oscar C. Ellison,	Jefferson, Montgomery.
John C. Emick,	Miltonvale, Cloud.
Harold Arthur Eslinger,	Kinsley, Edwards.
William D. Essmiller,	Great Bend, Barton.
Edward Benjamin Ester,	Peck, Sedgwick.
Elsie May Ester,	Peck, Sedgwick.
Noll Rufus Estes,	Stafford, Stafford.
V. Belle Estes,	Manhattan, Riley.
Howard H. Evans,	Manhattan, Riley.
Lewis Nelson Fairbrother,	Toronto, Woodson.
Lottie Alice Farnsworth,	Manhattan, Riley
Verne Farnsworth,	Manhattan, Riley.
Charles Ferguson,	Kansas City, Wyandotte.
Wallace Marine Ferguson,	St. Marys, (Jackson).
Glenn R. Fickel,	Holton, Jackson.
George Fincham,	Pratt, Pratt.
William Booker Flint,	Girard, Crawford.
Horace Glen Focht,	Wilson, Ellsworth.
John Foley,	Dodge City, Ford.
Elsie Forsman,	Hooser, Cowley.
I. Loren Fowler,	Manhattan, Riley.
Rebecca Francis,	St. John, Stafford.
Edward John Francoeur,	Concordia, Cloud.
Rachel E. Fredrich,	Dorrance, Russell.
James Freeborn,	Osborne, Osborne.
Eugene D. Freed,	Russell, Russell.
Walter Freeman,	Rantoul, Franklin.
Lenora Ellen Friedrich,	Winkler, Riley.
Arthur Fry,	Little River, Rice.
Jennie Mabelle Fullerton,	Eskridge, Wabaunsee.
Alice Maude Gaden,	Riley, Riley.
Harold Gaden,	Riley, Riley.
Blain B. Gemeny,	Junction City, Geary.
Bessie Gentry,	Homewood, Franklin.
Charles Miller Gibson,	Stillwell, Johnson.
Albert George Gieseman,	Idana, Clay.

Name.	Post-office and county (or state).
Chester L. Gifford,	Eskridge, Wabaunsee.
Alice Giles,	Great Bend, Barton.
Clarence H. Gilleece,	Manhattan, Riley.
Charles Gilliland,	Mayetta, Jackson.
George H. Gillman,	New Cambria, Saline.
Liberty Earnest Gingery,	Haddam, Washington.
Elizabeth C. Ginther,	Fairport, Russell.
Richard R. Gleed,	Lawrence, Douglas.
Harry Glidden,	Altoona, Wilson.
Walter William Goddard,	Minneapolis, Ottawa.
Bertha Goeken,	Linn, Washington.
Andrew Goldsmith,	Abilene, Dickinson.
John I. Goodrum,	Mayfield, Sumner.
May Gordon,	Utica, Ness.
Ralph F. Grandfield,	Maize, Sedgwick.
Gilbert Gordon Greenwood,	Wa Keeney, Trego.
Lillian Grinnell,	Salina, Saline.
Nelson Griswold,	Marysville, Marshall.
Ora A. Groves,	Edwardsville, Wyandotte.
Asa B. Hagans,	Utica, (Lane).
Albert Powell Hagen,	Newton, Harvey.
James W. Haight,	Paola, Miami.
Abbie B. Hall,	St. John, Stafford.
Glenn J. Hamma,	Hutchinson, Reno.
Aaron L. Hammond,	North Topeka, Shawnee.
Albert Haney,	Courtland, Republic.
George F. Hanson,	Olsburg, Pottawatomie.
Harry W. Harcourt,	Rock, Cowley.
Jessie F. Harrington,	Beloit, Mitchell.
Mabel Joy Harrison,	Riley, Riley.
James D. Harrod,	Stockholm, Wallace.
Ada Harshbarger,	Milo, Lincoln.
Charles Hartwig,	Goodland, Sherman.
Clarence Haywood,	Wilburn, Ford.
Ruby L. Heasley,	Assaria, Saline.
Mabelle Mae Hennessy,	Canton, McPherson.
William P. Henry,	Ellsworth, Ellsworth.
Walter Andrew Hepler,	Manhattan, Riley.
Laurance Herren,	Lincoln, Lincoln.
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Martha Harris Hill,	Ottawa, Franklin.
Clea S. Hillman,	Glen Elder, Mitchell.
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Hazel Juanita Hoke,	Manhattan, Riley.
Clarence Hole,	Manhattan, Riley.
Thomas John Holland,	Manhattan, Riley.
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Rodney Grant Holmberg,	North Topeka, Shawnee.
Matthew Holt,	Barnes, Washington.
Mildred E. Hooper,	Junction City, Geary.
William Harrison Hopp,	Wamego, (Wabaunsee).
Ray Horner,	Olathe, Johnson.
Archie Franklin Howard,	Comiskey, Lyon.
Leland A. Howell,	North Topeka, Shawnee.
Clarence Howenstine,	Manhattan, Riley.
Archie C. Hower,	Sylvan Grove, Lincoln.
Lena Huffman,	Havensville, Pottawatomie.
Arthur B. Hungerford,	Manhattan, Riley.
Ralph Harper Hunter,	Manhattan, Riley.

Name.	Post-office and county (or state).
Fitz Clark Hurd,	Manhattan, Riley.
Harold Raymond Hurd,	Topeka, Shawnee.
William Rufus Ice,	Cedar Point, Chase.
Mamie Ihde,	Hope, Dickinson.
Priscilla Jackson,	Wamego, Pottawatomie.
Raymond Jackson,	Elmont, Shawnee.
Faye E. Jacobus,	Udall, Cowley.
Henry Janke,	Claflin, Barton.
Jesse L. Jarred,	La Cygne, Linn.
(Mrs.) Florence Jeffries,	Manhattan, Riley.
Mary Cassandra Jeffries,	Manhattan, Riley.
Wilbur R. Jeffries,	Manhattan, Riley.
Frank R. Jenkins,	Leonardville, Riley.
Robert L. Jennison,	Farnsworth, Lane.
John Jewett,	Dighton, Lane.
Albert E. Johnson,	Miltonvale, Cloud.
Roy Johnson,	Russell, Russell.
Guy Ellsworth Johnston,	Eskridge, Wabaunsee.
Maysel Daisy Johnstone,	Goffs, Nemaha.
George Walton Jones,	Plymouth, Lyon.
Glen C. Jones,	Hamlin, Brown.
Mary Countiss Jones,	Manhattan, Riley.
Nathan Alonzo Jones,	Bendena, Doniphan.
Raymond Jones,	Springfield, Seward.
Tillman Francis Jones,	Corwin, Harper.
Oscar Martin Jorgenson,	Manhattan, Riley.
Inez Joslin,	Lincoln, Lincoln.
Mary Kernohan,	Nashville, Kingman.
Edgar A. Kietzman,	Volland, Wabaunsee.
Nellie L. King,	Lexington, Clark.
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Clifford K. Kirkpatrick,	Rossville, Shawnee.
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Roy William Kiser,	Geneseo, Rice.
Michael Knapp,	Leavenworth, Leavenworth.
William Albert Kraettli,	Clay Center, Clay.
Frank Kramer,	Zeandale, Riley.
J. Ralph LaMont,	Longton, Elk.
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Willard Pym Lawrence,	Cedar Point, Chase.
Walter Melvin Lawry,	Manhattan, Riley.
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C. Oscar Levine,	Marysville, Marshall.
Charles Harrison Lightner,	Kinsley, Edwards.
Benjamin N. Linton,	Mayetta, Jackson.
Edward W. Lloyd,	Kansas City, Wyandotte.
Walter W. Loeffler,	Linn, Washington.
Hulda Lundeen,	McPherson, McPherson.
Levi L. Lundholm,	Osage City, (Lyon).
Rex Lynch,	Clayton, *Missouri.*
John M. Lyons,	Bendena, Doniphan.
Leuguel Emmit McBride,	Eudora, Douglas.
Edward H. McCarthy,	Edgerton, Johnson.
Sherman McClintock,	Utica, Ness.
William Nelson McDaniel,	Perth, Sumner.
Clarence J. McDonald,	Wayne, Republic.
Zara Harmon McDonnall,	Goff, Nemaha.
Oakley C. McIntosh,	Washington, Washington.
Bertha McKeage,	Hoyt, Jackson.

Name.	Post-office and county (or state).
Julia McKee,	Marysville, Marshall.
Blanche McLain,	Manhattan, Riley.
Roy McMahan,	Alma, Wabaunsee.
Grace McPhail,	Scranton, Osage.
Bertha Margaret Magers,	Whiting, Jackson.
Maude Mannen,	Lincoln, Lincoln.
Wilfrid Marsh,	Paola, Miami.
Ralph Marshall,	Conway Springs, Sumner.
Carroll Marty,	Courtland, Republic.
Cora Estella Maxwell,	Bala, Riley.
Florence Gertrude Maxwell,	Bala, Riley.
Mary Edith Maxwell,	Manhattan, Riley.
Albert B. May,	Williamstown, Jefferson.
Alfred G. May,	Williamstown, Jefferson.
Leonard Brooks Mayer,	Newton, Harvey.
Harry L. Mead,	Dexter, Cowley.
Otto Meckenstock,	Clyde, Cloud.
Fred C. Merritt,	Great Bend, Barton.
Alsey W. Michael,	Havana, Montgomery.
Effie May Miles,	Walker, Ellis.
Ella R. Miller,	Belvue, Pottawatomie.
Clarence Howard Milliken,	Hill City, Graham.
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Paul Mingenbock,	McPherson, McPherson.
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George F. Neill,	Manhattan, Riley.
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Victor Luther Newman,	Muncie, Wyandotte.
John Carlton Nichols,	Eureka, Greenwood.
Bernice P. Nicholson,	Manhattan, Riley.
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Oscar Marion Norby,	Cullison, Pratt.
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Mamie Norton,	Barnard, Lincoln.
Ben Oldweiler,	Mayetta, Jackson.
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Earl Osborn,	Emporia, Lyon.
Ermine L. Osborn,	Medicine Lodge, Barber.
Ray Osborn,	Emporia, Lyon.
Ephriam A. Ostlund,	Clyde, Washington.
George Miles Overlander,	Manhattan, Riley.
William Charles Pacey,	Miltonvale, Cloud.
Ray Morrow Page,	Salina, Saline.
Fred Parken,	Morrowville, Washington.
Everett Charles Parmley,	Garden City, Finney.
Emma Parr,	Kansas City, (Johnson).

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Lee H. Patterson,	Seneca, Nemaha.
William E. Payne,	Randall, Jewell.
Mabel Pearson,	Clifton, Washington.
Blanche Peck,	Tecumseh, Shawnee.
Ina Pence,	Elmont, Shawnee.
Frank Perry,	Wabaunsee, Wabaunsee.
Arthur Ray Phelon,	Scranton, Osage.
Evelyn Emma Phillips,	Kackley, Republic.
Herman E. Phillips,	Parsons, Labette.
Herbert Pierce,	Seely, Cowley.
George Maben Pike,	Ashland, Clark.
Guy G. Pingree,	Pomona, Franklin.
Howard Pinkham,	Marysville, Marshall.
Homer Pipher,	Oskaloosa, Jefferson.
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Forrest Mark Platt,	Manhattan, Riley.
M. Lillian Plumb,	Fairview, Brown.
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Lester B. Pollom,	Topeka, Shawnee.
Clara Emily Post,	Ocheltree, Johnson.
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George W. Pray,	Hope, Dickinson.
Earl F. Price,	Baldwin, Douglas.
Edward R. Prior,	McCracken, Rush.
Alvin S. Prouse,	Anthony, Harper.
Glenn Alvin Quick,	Goodland, Sherman.
Arthur Floyd Rader,	Kelso, Morris.
Gertrude Randle,	Riley, Riley.
Grace Rankin,	Utica, Ness.
Karl O. Ranney,	Fontana, Miami.
Chester Arthur Reavis,	Havana, Montgomery.
Enid Alzine Redden,	Gypsum, Saline.
Nellie Reed,	Havensville, Pottawatomie.
Walter I. Reed,	Burden, Cowley.
Emil Clifton Reehling,	Elmdale, Chase.
Emily R. Rees,	Leavenworth, Leavenworth.
Fred Thomas Rees,	Grantville, Jefferson.
Frank Reid,	Cherokee, Crawford.
Ethyl Retzer,	Manhattan, Riley.
Milton Jacob Rhodes,	Hope, Dickinson.
Lair D. Richardson,	Havensville, Pottawatomie.
Roy Ritter,	Spearville, Ford.
Franklin Robison,	Burlingame, Osage.
Marguerite Robison,	Delevan, Morris.
Clarence Roby,	Eureka, Greenwood.
Mary Rodgers,	Manhattan, Riley.
William Rohrer,	Lawrence, Douglas.
Jeannette Elizabeth Root,	North Topeka, Shawnee.
Charles L. Rose,	Almena, Norton.
Warren A. Rude,	Hoisington, Barton.
Ralph H. Russell,	Vernon, Woodson.
Earl Sadlemire,	Topeka, Shawnee.
Mary H. Saneman,	Blue Rapids, Marshall.
Harry Roscoe Satterfield,	Holton, Jackson.
Stuart Savage,	Manhattan, Riley.
Axel Scheleen,	Manhattan, Riley.
Otto Schild,	Gerardy, Washington.
Manuel Schimkowitsch,	Voda, Trego.
Agatha M. Schmidler,	Marysville, Marshall.
Martha Schubert,	Manhattan, Riley.

Name.	Post-office and county (or state).
Ludwig Schwab,	Partridge, Reno.
Earl Scidmore,	Tescott, Ottawa.
Harvey James Sellers,	Minneapolis, Ottawa.
Hartley W. Setchell,	Morland, Graham.
Fred Harvey Sharp,	White City, Morris.
Kent W. Shartel,	Oklahoma City, *Oklahoma.*
Bertha Shaw,	Broughton, Clay.
Joel T. Shaw,	Oskaloosa, Jefferson.
Loren John Shepherd,	Fort Scott, Bourbon.
John W. Sills,	North Cedar, Jefferson.
Warren Earl Simonsen,	Manhattan, Riley.
Edythe Skinner,	Topeka, Shawnee.
John Slaback, jr.	Conway, McPherson.
Elizabeth Smerchek,	Irving, Marshall.
Charles Joseph Smith,	Lawrence, Douglas.
Hazel Smith,	Ford, Ford.
Loyd Folsom Smith,	Scranton, Osage.
Marion William Smith,	Caldwell, Sumner.
Walter Gillette Smith,	Manhattan, Riley.
William Smith,	Independence, Montgomery.
Mark Edmund Spencer,	Long Island, Phillips.
Fane D. Springer,	Rantoul, Franklin.
Elmer G. Stahl,	Topeka, Shawnee.
Fesler Stalder,	Meade, Meade.
William Edward Stanley,	Burrton, Harvey.
Stutely Henry Stark,	Ozawkie, Jefferson.
Walter W. Stark,	Ozawkie, Jefferson.
Walter Steffey,	Valley Falls, Jefferson.
Chester A. Sterling,	Carlton, Dickinson.
Lulu Sterling,	Carlton, Dickinson.
Ralph Ralston Sterrett,	Morganville, Clay.
George Benjamin Stocks,	Blue Rapids, Marshall.
Delia Stoddard,	Manhattan, Riley.
Edward F. Stoppard,	Independence, Montgomery.
Glenn Stotts,	Conway, McPherson.
Blount Caruthers Straughan,	Arkansas City, Cowley.
Thomas Leonard Sturtevant,	Formosa, Jewell.
Louis Albert Swartz,	Bancroft, Nemaha.
Ben F. Sweet,	Manhattan, Riley.
Orton Lemont Talbott,	McPherson, McPherson.
Fred Martin Taylor,	Formosa, Jewell.
Ida May Taylor,	Formosa, Jewell.
Ivie Ann Taylor,	Lawrence, Douglas.
Oscar M. Taylor,	Lawrence, Douglas.
Clyde F. Teagarden,	Wayne, Republic.
Laura M. Teagarden,	Wayne, Republic.
Benjamin Thomas,	Homestead, Chase.
William Thorton,	Maplehill, Wabaunsee.
Wyly Thornton,	Perry, Jefferson.
Harry M. Toland,	Galva, McPherson.
Leander Alpheas Tombaugh,	Athol, Smith.
Laura Allan Toothaker,	Blaine, Pottawatomie.
Carl Harris Torrence,	Reading, Lyon.
Maggie Trablik,	Goodland, Sherman.
Jessie D. Trimble,	Marysville, Marshall.
Ada May Tromble,	Asherville, Mitchell.
Ray B. Trull,	Hiawatha, Brown.
Claude H. Tucker,	Manhattan, Riley.
Katherine Ann Tucker,	Manhattan, Riley.
Robert Edward Turner,	Manhattan, Riley.

Name.	Post-office and county (or state).
Carl Alvin Vann,	Marquette, McPherson.
Guy Struple VanWey,	Pendennis, Lane.
Edgar Allen Vaughn,	Toronto, Woodson.
Ruth Venables,	Bellaire, Smith.
Henry John Vogelsang,	Randolph, Riley.
Don Wade,	Formoso, Jewell.
Pearl Adeline Walters,	Riley, Riley.
Chester Warner,	Arlington, Reno.
Rees C. Warren,	Olpe, Lyon.
Charles Oscar Watkins,	Anthony, Harper.
LaVerne Watson,	Powhattan, Brown.
Andrew Wear,	Barnard, Lincoln.
Gertrude Weber,	Manhattan, Riley.
James West,	Rydal, Republic.
Elizabeth Mae Whipple,	Manhattan, Riley.
Frank Elbert Whipple,	Longford, Clay.
Lucy Ethel Whipple,	Manhattan, Riley.
Harry H. Whitaker,	Louisburg, Miami.
Charles White,	Great Bend, Barton.
Hattie White,	Manhattan, Riley.
Mamie White,	Manhattan, Riley.
Roy E. Whitlock,	Belvue, (Wabaunsee).
Phil S. Whitney,	Hymer, Chase.
Raymond Whitney,	Manhattan, Riley.
Roy R. Wiard,	Keats, Riley.
Frank Williams,	Hull, Marshall.
Harry Byron Williams,	Topeka, Shawnee.
Shelton Williams,	Kenneth, Johnson.
Guy Williamson,	Ashton, Sumner.
Earl J. Willis,	Manhattan, Riley.
William Wilson,	Manhattan, Riley.
Susan Elizabeth Wingfield,	Dwight, (Geary).
Dean Wise,	Clearwater, Sedgwick.
John Barton Wise,	Clearwater, Sedgwick.
Reuben E. Wiseman,	Manhattan, Riley.
Florence M. Woolverton,	Holton, Jackson.
Bertha Mabel Worthing,	Belvue, Pottawatomie.
B. Earl Wreath,	Manhattan, Riley.
Henry Wunsch,	Topeka, Shawnee.
Shirlie York,	Manhattan, (Pottawatomie)
Henry Zimmerman,	Stilwell, Johnson.
Clay Collins Zollars,	Manhattan, Riley.
Lola Elizabeth Zollars,	Manhattan, Riley.

PREPARATORY.

Oscar Adee,	Wells, Ottawa.
Homer G. Allen,	Richfield, Morton.
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Addie M. Baird,	Manhattan, Riley.
Arthur Morgan Balston,	Palmer, Washington.
Francis L. Bein,	Kansas City, *Missouri.*
David Furdnant Berggren,	McPherson, McPherson.
Harry Hugo Berggren,	McPherson, McPherson.
Thomas Blackwood,	Idana, Clay.
John T. Branson,	Belleville, Republic.
Michael Brennen,	Belvue, Pottawatomie.

Name.	Post-office and county (or state).
Eula Carman,	Riley, Riley.
Lester R. Carter,	Russell, Russell.
John Henry Chenoweth,	Belpre, Edwards.
Wiley McKahnley Chenoweth,	Belpre, Edwards.
Alfred L. Clapp,	Yates Center, Woodson.
Earl Cook,	Russell, Russell.
Ella Cook,	Garden City, Finney.
Joseph Howard Crane,	Conway Springs, Sumner.
Walter Crotts,	Woodsdale, Stevens.
Roy C. Curtis,	Lawrence, Douglas.
Jennie E. Davies,	Oakhill, Clay.
Sylvia Belle Dawes,	Asherville, Mitchell.
Evelyn Amy Denman,	Manhattan, Riley.
Russell E. Derry,	Emmet, Pottawatomie.
Edith Disney,	Sedan, Chautauqua.
(Mrs.) Eliza Disney,	Sedan, Chautauqua.
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James Lee Dutton,	Concordia, Cloud.
Ed. R. Eck,	White City, Morris.
James S. Edwards,	Frankfort, Marshall.
Oscar Ek,	McPherson, McPherson.
Earl Elliott,	Bancroft, Nemaha.
Jennie Norwood Ellis,	Phillipsburg, Phillips.
Reba Anna Ellison,	Jefferson, Montgomery.
Ralph Gerald Erbentraut,	Minneapolis, Ottawa.
Alfred E. Erickson,	Lincolnville, Marion.
John B. Fearey,	Anness, Sedgwick.
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Roy Lee Fox,	Ashland, Clark.
Fredrick G. Fryman,	Centropolis, Franklin.
Helena Oma Fryman,	Centropolis, Franklin.
William Henry Gawthorp,	Anness, Sedgwick.
Edward Gimpel,	Pratt, Pratt.
Otto H. Goellert,	Colby, Thomas.
John G. Goertzen,	Inman, McPherson.
Lillian Gridley,	Green, (Riley).
Hans Peter Haack,	Florence, Marion.
Courtney Harris,	Great Bend, Barton.
Hazel Harris,	Great Bend, Barton.
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Frank Hejtmanek,	Rossville, Shawnee.
Jesse Billing Hill,	Hudson, Stafford.
Thomas A. Hladek,	Collyer, Trego.
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Quincy Milton Howe,	Wellington, Sumner.
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Herbert E. Hubbard,	Manhattan, Riley.
Delbert L. Hughes,	Manhattan, Riley.
Pearl Laura Jenkins,	Manhattan, Riley.
Frank Joseph Julke,	Arrington, Atchison.
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Charlie Clarence King,	Lexington, Clark.
Victor Thomas Kirk,	Bazaar, Chase.
Karl Klein,	Nashville, Kingman.
Lee Lake,	Formosa, Jewell.
Roy Lasswell,	St. Clere, Pottawatomie.
Elizabeth Lewis,	Riley, Riley.
Thomas A. Lowe,	Liberal, Seward.
Carl Lundin,	Cleburne, Riley.

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Willby McAhren,	Caven, Pratt.
William Hyne McCorkle,	Fort Scott, Bourbon.
Charles Alfred McHenry,	Valencia, Shawnee.
Guy Crawford McWilliams,	Manhattan, Riley.
Lovin Mack,	Soldier, Jackson.
Chester Bruce Martin,	Mentor, Saline.
Harrison Meyer,	Basehor, Leavenworth.
Clarence Grover Moore,	Manhattan, Riley.
Martha Musch,	Elmo, Dickinson.
Florence Neece,	Netawaka, Jackson.
Albert H. Nelson,	Falun, Saline.
C. Willie Nelson,	Palmer, Washington.
Oscar C. Nelson,	Girard, Crawford.
George J. Nicolay,	Osage City, Osage.
Theodore E. Nicolay,	Scranton, Osage.
Roy W. Nixon,	Manhattan, Riley.
May Hattie Nonamaker,	Manhattan, Riley.
Florence B. Palmer,	Manhattan, Riley.
Thena Parr,	Kansas City, (Johnson).
John Pearson,	Ogallah, Trego.
Martin Peterson,	Manhattan, Riley.
Bevie P. Platt,	Ætna, Barber.
Roy I. Platt,	Ætna, Barber.
Andrew L. Pringle,	Rose, Woodson.
James E. Reser,	Salina, Saline.
Albert Nicholas Roach,	Lowemont, Leavenworth.
Joseph Roberts,	Dover, Shawnee.
Thomas Robertson,	Arrington, Atchison.
Harley Robinson,	Great Bend, Stafford.
David Leon Rothweiler,	Bison, Rush.
Samuel Franklin Rowe,	Scranton, Osage.
Homer Wesley Russell,	Cheney, (Kingman).
Reuben S. Sanders,	Osage City, (Lyon).
Robert Seacat,	Ashland, Clark.
Clyde M. Shaw,	Concordia, Cloud.
Paul J. Simpson,	Canton, McPherson.
Agnes Lenora Sjogren,	Pawnee Rock, Pawnee.
James F. Stack,	Manhattan, Riley.
Bessie Stephenson,	Manhattan, Riley.
Pearl Straub,	Manhattan, Riley.
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Fred Taylor,	Rose, Woodson.
Fichard Taylor,	Great Bend, Barton.
Lewis J. Thompson,	Ozawkie, Jefferson.
Leo Matheny Torrence,	Arrington, (Jefferson).
Ray E. Trant,	Troy, Doniphan.
Lewis Trimpe,	Preston, Pratt.
Alva Walker Trueman,	Holton, Jackson.
Nellie Marie Turner,	Manhattan, Riley.
John Isaac Vale,	Webber, Jewell.
Frederick John Vallance,	Plymouth, Lyon.
Ray Eldon Waggoner,	Baileyville, Nemaha.
John McBrayer Walker,	Coffeyville, Montgomery.
Morgan B. Wallace,	Concordia, Cloud.
Frank Wasinger,	Victoria, Ellis.
Lawson Whitmore,	Ogden, Riley.
Loyd G. Wikoff,	Beattie, Marshall.
Katie Williams,	Larned, Pawnee.
David H. Wingerd,	Hope, Dickinson.
Lucy E. Woods,	Belleville, Republic.

SPECIAL STUDENTS.

Name.	Post-office and county (or state).
Charles M. Alspach,	Axtell, Marshall.
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F. O. Chase,	Manhattan, Riley.
Walter S. Criswell,	Frankfort, Marshall.
Ida E. DeSelm,	Manhattan, Riley.
Nellie June Doane,	Manhattan, Riley.
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Earnest Earl Ferguson,	Valley Falls, Jefferson.
Anna W. Gordon,	Manhattan, Riley.
Lloyd McConnell Graham,	Topeka, Shawnee.
(Mrs.) Jessie Gulick,	Manhattan, Riley.
Edward C. O. Hartke,	Lincolnville, Marion.
Alvalina Thankful Hill,	Manhattan, Riley.
Franklin Pierce Hillis,	Manhattan, Riley.
Harvey A. Horton,	McPherson, McPherson.
Hespera Hougham,	Manhattan, Riley.
Esta Jane Hungerford,	Soldier, Jackson.
Lillean Kendrick,	Leavenworth, Leavenworth.
Carrie Idell Lugenbeel,	Padonia, Brown.
Aura McCowan,	Concordia, Cloud.
Margaret Mack,	Manhattan, Riley.
Robert J. Mackey,	Topeka, Shawnee.
Joseph Shaw Montgomery,	Cedarpoint, Chase.
(Mrs.) Louise Peters,	Manhattan, Riley.
Frank W. Ranney,	Osawatomie, Miami.
Alvin Josiah Reed,	St. Clere, Pottawatomie.
Marjorie Beryl Rickman,	Manhattan, Riley.
Bertha H. Sawhill,	Edgerton, Johnson.
Charles Streeter,	Manhattan, Riley.
John W. Stover,	Manhattan, Riley.
Ruth Pearl Taylor,	Chapman, Dickinson.
Walter C. Taylor,	Long Island, Phillips.
Olive F. Tenney,	Junction City, Geary.
Alice Harriet Tucker,	Manhattan, Riley.
Eleanor Dyer Wheeler,	Topeka, Shawnee.
O. E. White,	Dwight, Morris.
Agnes Woestemeyer,	Bethel, Wyandotte.
Bertha Margaret Zeller,	Keats, Riley.

DAIRY SHORT COURSE.

Ralph Ballard,	Scranton, Osage.
John McCoy Bowman,	Council Grove, Morris.
James M. Currigan,	Oswego, Labette.
Glenn Ananias Dawes,	Asherville, Mitchell.
Victor Pearl Dixon,	Manhattan, Riley.
R. E. French,	Manhattan, Riley.
Melvin O. Hensley,	Logan, Phillips.
Charles Sanger Kenmore,	Iola, Allen.
Gideon McKee,	Blue Rapids, Marshall.
Lee McKissick,	Minneola, Clark.
Alfred Cecil Mauzey,	Cummings, Atchison.
George Leslie Meierdircks,	Marion, Marion.
William James Moore,	Wakarusa, Shawnee.

Name.	Post-office and county (or state)
Anton Musil,	Blue Rapids, Marshall.
James Jeffrey Orr,	Manhattan, Riley.
Porter Grant Packard,	Manhattan, Riley.
Gerhard J. Regier,	Whitewater, Butler.
Harry R. Ross,	Abilene, Dickinson.
Roscoe Rush,	Pomona, Franklin.
Otto Schweitzer,	Baker, Brown.
Lester Sommers,	Manhattan, Riley.
Frank Leon Stahl,	Auburn, Shawnee.
Forrest Barrett Trull,	Hiawatha, Brown.
Thomas Abraham Trull,	Hiawatha, Brown.
Roy Whitmore,	Ogden, Riley.
Grant Yaussi,	Baker, Brown.

FARMERS' SHORT COURSE—SECOND TERM.

George Thomas Baker,	Saxman, Rice.
Oscar Griffith Baker,	Lincoln, Lincoln.
G. Selden Brockway,	Wellsville, Franklin.
Nelson Buckles,	Otego, Jewell.
J. B. Campbell,	Meriden, Jefferson.
Paul Everett Cashatt,	Oskaloosa, Jefferson.
Clarence Arthur Crotts,	Turon, Reno.
Sigurd E. Dahlsten,	Lindsborg, McPherson.
William K. Davies,	Fall River, Elk.
Clyde L. Dull,	Washington, Washington.
Everett W. Eustace,	Wakefield, Clay.
Henry Faris,	Denison, Jackson.
Harold Fish,	Centerville, Linn.
L. H. Fish,	Centerville, Linn.
John Funderburgh,	Morrill, Brown.
Raymond E. Gates,	Anthony, Harper.
Hans Peter Hansen,	Vesper, Lincoln.
Ralph M. Hoch,	Hartford, Lyon.
Eldon Elisha Hollister,	Sabetha, Nemaha.
Robinson Philip Horney,	Neodesha, Wilson.
Charles P. Johnson,	Macksville, Stafford.
Chester A. King,	Emporia, Lyon.
Charles Nervin Kiser,	Otego, Jewell.
Arza Samuel Lamoree,	Russell, Russell.
Henry H. Levien,	Hanover, Washington.
Harry E. Lidikay,	Wellsville, Miami.
Albin Lundquist,	Lindsborg, McPherson.
Carey Samuel McConachie,	Ottawa, Franklin.
Walter C. Matti,	Cottonwood Falls, Chase.
David Roy Miller,	Oxford, Sumner.
Ralph Glee Rexroad,	Darlow, Reno.
George A. Rinehart,	Arkansas City, Cowley.
Herbert C. Seal,	Meriden, Jefferson.
Dale A. Tucker,	Salina, Saline.
Harry Milton Weil,	Overbrook, Osage.
Arthur F. Wilke,	Troy, Doniphan.
Frank Williams,	Hull, Marshall.

FARMERS' SHORT COURSE—FIRST TERM.

Edwin Carl Albertson,	Sedgwick, Harvey.
Fred S. Alford,	Lawrence, Douglas.
Homer G. Allen,	Richfield, Norton.
Claude H. Arbuthnot,	Haworth, Republic.

Name.	Post-office and county (or state).
Lyman Bayard Arnold,	Long Island, Phillips.
Harrison Morton Ashcraft,	Sedgwick, Harvey.
Jay O. Baird,	Manhattan, Riley.
Lantie Benton Barnard,	Caldwell, Sumner.
Orville Longacre Barry,	Mayfield, Sumner.
Lewis A. Bauer,	Elsworth, Ellsworth.
Lucian A. Beckett,	Deerfield, Kearny.
Walter Berg,	Salina, Saline.
August Bizek,	Timken, Rush.
Frank Boyer,	Manhattan, Riley.
Earl Bracewell,	Kincaid, Anderson.
William Edward Broadhurst,	Oxford, Sumner.
Peter Brookshier,	Solomon Rapids, Mitchell.
Harry Buckingham,	Lawton, *Oklahoma.*
Will S. Catlin,	Olathe, Johnson.
Frank W. Chamberlin,	Carbondale, Osage.
C. T. Chapman,	Riley, Riley.
Orville D. Clark,	Belpre, Edwards.
Ernest Colby,	Long Island, Phillips.
John Colle,	Saxman, Rice.
Clyde Clarence Cook,	Russell, Russell.
James Joseph Corr,	Clearwater, Sedgwick.
John William Corr,	Clearwater, Sedgwick.
George D. Cox,	Cummings, Atchison.
Ernest L. Cromb,	Ellis, Ellis.
John Ivan Crouch,	Saffordville, Chase.
Floy Eugene Dazey,	Hill City, Graham.
Lawrence V. Deming,	Larkin, Jackson.
Arthur L. Dill,	Clarinda, *Iowa.*
William Droegemueller,	Hanover, Washington.
Vernon Dryden,	Larned, Pawnee.
Victor Vincil Dryden,	Larned, Pawnee.
Daniel Webster Eastman,	Thurman, Chase.
Ralph Gerald Erbentraut,	Minneapolis, Ottawa.
Harry Eshelman,	Sedgwick, Harvey.
David Fredwrick Fellnagle,	Princeton, Franklin.
Earnest Earl Ferguson,	Valley Falls, Jefferson.
Frank Folz,	Marysville, Marshall.
Charles Ellis Ford,	Minneapolis, Ottawa.
B. R. Fruhbauer,	Palmer, Washington.
Ray Gabrielson,	Hutchinson, Reno.
Claude H. Geesling,	Turon, Reno.
Paul J. Giesel,	Overbrook, (Douglas).
Albert George Gieseman,	Idana, Clay.
Jacob M. Goering,	Moundridge, McPherson.
Alfred L. Greenwood,	Wa Keeney, Trego.
William Gulick,	Talmage, Dickinson.
Clarence G. Gustafson,	Galva, McPherson.
Reuben J. Haffa,	Russell, Russell.
John Larkin Hall,	Glen Elder, Mitchell.
Andrew C. Hanson,	Lyndon, Osage.
Ernest L. Hanstine,	Whitewater, Butler.
Jason E. Harris,	Howard, Elk.
John G. Hege,	Sedgwick, Harvey.
Pearl F. Hendricks,	Glen Elder, Mitchell.
Earl Hennigh,	Sabetha, Nemaha.
Clea Hillman,	Glen Elder, Mitchell.
Melvin R. Hobbs,	Smith Center, Smith.
Frank O. Holland,	Topeka, Shawnee.
Hulbert E. Hoss,	Whitewater, Butler.

Name.	Post-office and county (or state).
Paul W. Hoss,	Whitewater, Butler.
John Ben Hughes,	Arkansas City, Cowley.
Harry Johnstone,	Goff, Nemaha.
Carl W. Kleile,	Raymond, Rice.
Michael Knapp,	Leavenworth, Leavenworth.
John M. Kubin,	McPherson, McPherson.
James Kulick,	Ellsworth, Ellsworth.
Anton J. Kvicala,	Cummings, Atchison.
James William Liard,	Cummings, Atchison.
Earl Lonnberg,	Topeka, Shawnee.
Clarence Ray McCall,	Wa Keeney, Trego.
Thomas Lester McCleary,	Linn, Washington.
E. O. McComas,	Macksville, Stafford.
Edward J. McQuellen,	Clifton, Washington.
Arthur J. Mahon,	Clyde, Cloud.
Fred Hammond March,	El Dorado, Butler.
Chester Bruce Martin,	Mentor, Saline.
Charles W. Meeker,	Larned, Pawnee.
John C. Meeker,	Larned, Pawnee.
Martin Mellgren,	Olsburg, Pottawatomie.
Chester A. Miller,	Sabetha, Brown.
Fred L. Minx,	Lincoln, Lincoln.
Charles Benjamin Myers,	Mayfield, Sumner.
Steven D. Needham,	Rantoul, Franklin.
Cyrus W. Nelson,	El Dorado, Butler.
P. C. Nielson,	Vesper, Lincoln.
Fred Novotny,	Pratt, Pratt.
Harry A. Oberhelman,	Barnes, (Riley).
Ralph Oden,	Sterling, Rice.
Fred Oscar Olson,	Brookville, Saline.
Homer Emmett O'Neil,	Wellsville, Franklin.
Cash J. Osburn,	Peru, Chautauqua.
Walter Ottken,	Campus, Gove.
Fred Parken,	Morrowville, Washington.
Lester L. Parrish,	Peabody, Marion.
George F. Parsons,	Burden, Cowley.
Harley G. Parsons,	Udall, Cowley.
Walter Peachey,	Pratt, Pratt.
George W. Peck,	Meriden, Jefferson.
Emanuel Peterson,	Garrison, Pottawatomie.
G. Alfred Peterson,	Garrison, Pottawatomie.
Kenneth Petty,	Morganville, Clay.
Ensil Clifton Reehling,	Elmdale, Chase.
Edward Reilly,	Little River, Rice.
Ray Rinehart,	Bernal, Reno.
John Rioth,	Delavan, Morris.
Albert Nicholas Roach,	Lowemont, Leavenworth.
Elbert Robbins,	Arkansas City, Cowley.
Ernest Rodenberg,	Halstead, Harvey.
Edward J. Rogers,	Clyde, Cloud.
David Leon Rothweiler,	Bison, Rush.
Francis Royer,	Morrill, Brown.
Alfons Schimkowitsch,	Collyer, Trego.
Henry John Seidel,	Tipton, Mitchell.
Leonard H. Skinner,	Ottawa, Franklin.
James William Smith,	Cimarron, Gray.
William Edwin Smith,	Hoyt, Jackson.
Raymond J. Springer,	Manhattan, (Pottawatomie)
Fesler Stalder,	Meade, Meade.
Roy B. Sterrett,	Quinter, Gove.

Name.	Post-office and county (or state).
James Roy Stewart,	Talmage, Dickinson.
R. Porter Stocking,	Mayfield, Sumner.
Charles Vernon Wait,	Centerville, Linn.
Charles A. Weber,	Winkler, Riley.
John Raymond West,	Lawrence, Douglas.
Roy E. Whitlock,	Belvue, (Wabaunsee).
William H. Wilke,	Troy, Doniphan.
Raleigh Willey,	Manhattan, Riley.
Wilmer Wilson,	Osage City, Osage.
Ray Wyard,	Manhattan, Riley.
Dwight Young,	Smith Center, Smith.
William Zimmerman,	Bushton, Rice.

DOMESTIC SCIENCE SHORT COURSE—SECOND TERM.

Minnie Dora Albertson,	Sedgwick, Harvey.
Winnie Flora Albertson,	Sedgwick, Harvey.
Hilma Louise Anderson,	Olsburg, Pottawatomie.
Blanche Lucile Barker,	Argentine, Wyandotte.
(Mrs.) Ada Barnard,	Manhattan, Riley.
Ethel Agnes Barnard,	Piper, Wyandotte.
Maude Merril Barnard,	Piper, Wyandotte.
Annie E. Belin,	Green, (Riley).
Lillie Bergman,	Manhattan, Riley.
Bessie Bigelow,	Gardner, Johnson.
Grace Elizabeth Bigler,	Gypsum, Saline.
Stella Brown,	Clay Center, Clay.
Mary O. Burr,	Manhattan, Riley.
Josephine Alice Campbell,	Abilene, Dickinson.
Lillie Emelia Carlson,	Manhattan, Riley.
Olga Carlson,	Manhattan, Riley.
Dora Clark,	Delphos, Ottawa.
M. Bessie Clark,	Riley, Riley.
Corinne Coston,	Topeka, Shawnee.
Margaret R. Darrah,	McPherson, McPherson.
Bessie Deming,	Larkin, Jackson.
Tillie Dietrich,	Broughton, Clay.
Muriel Angeline Douglas,	Oberlin, Decatur.
Ethel D. Eames,	Delphos, Ottawa.
Minnie Erickson,	Lincolnville, Marion.
Mabel Fagerberg,	Olsburg, Pottawatomie.
Esther E. Fredrich,	Dorrance, Russell.
Mae Elvira Gladding,	Rantoul, Franklin.
Stella Glenn,	Manhattan, (Pottawatomie).
Ina May Glick,	Manhattan, Riley.
Minnie A. Gugenhan,	May Day, Riley.
Dollie Hamm,	Manhattan, Riley.
Elsie Hamm,	Manhattan, Riley.
Emma Hancke,	Council Grove, Morris.
Esther Rebecca Hanson,	Olsburg, Pottawatomie.
Esther Barbara Hege,	Sedgwick, Harvey.
Lilah Maude Hirst,	Hutchinson, Reno.
Anna Laura Johnson,	Osage City, Osage.
Thomas Nelson Jones,	Plymouth, Lyon.
Flossie Knox,	Havensville, Pottawatomie.
Lydia Koenig,	Solomon, Dickinson.
Rosa Caroline Kolling,	Morganville, Clay.
Florence Lambertson,	Fairview, Brown.
Mary Alice Laughlin,	Whitewater, Butler.
Dora O. Leisy,	Halstead, Harvey.

Name.	Post-office and county (or state).
Fairy Lightfoot,	Manhattan, Riley.
Mary Grace Lumb,	Wakefield, Clay.
Ethelyn Meryl McCormick,	Nickerson, Reno.
Florence Ethel McMurry,	Darlow, Reno.
Bertha MacMillan,	Wamego, Pottawatomie.
Rosa Olga Marshall,	Garden City, Finney.
Birdie Masheter,	Sabetha, Nemaha.
Maggie B. May,	New Cambria, Saline.
Eunice Miley,	Dresden, Decatur.
Nell Morrison,	Oskaloosa, Jefferson.
Clara B. Morrow,	Blue Rapids, Marshall.
Claire Anna Morse,	Lamar, Ottawa.
Lydia Nelson,	Lindsborg, McPherson.
Lillie Neustrom,	Herington, (Morris).
Alice E. O'Brien,	Manhattan, Riley.
(Mrs.) Faye H. Perrin,	Manhattan, Riley.
Reba Pfaff,	Lincoln, Lincoln.
Lissa Pierson,	Attica, Harper.
Bevie P. Platt,	Ætna, Barber.
Julia Rasmussen,	Vesper, Lincoln.
Ina Reaume,	Ellsworth, Ellsworth.
Hallie Reed,	Havensville, Pottawatomie.
Nina Virginia Ross,	Alta Vista, Geary.
Gracia Saatholf,	Manhattan, Riley.
Florence Silven,	Osage City, Osage.
Cora Alice Smith,	Valencia, Shawnee.
Emma Laura Smith,	Topeka, Shawnee.
Sadie Matilda Sorgatz,	Beloit, Mitchell.
Martha Anna Spellman,	Gypsum, Saline.
Sadie A. Springer,	Manhattan, Riley.
Margaret Gibson Staley,	Richmond, Franklin.
Elsa Steinbach,	Partridge, Reno.
Gladys Elizabeth Switzer,	Yoder, Reno.
Ruth Pearl Taylor,	Chapman, Dickinson.
Ellen Theander,	Lost Springs, Marion.
Sena Thompson,	Denison, Jackson.
Vera Lillian Tull,	Manhattan, Riley.
Ida R. Walls,	Irving, Marshall.
Catherine E. Washington,	Manhattan, Riley.
Martha Wehrenberg,	Bazaar, Chase.
Eleanor Dyer Wheeler,	Topeka, Shawnee.
Katie Worrel,	Manhattan, Riley.

DOMESTIC SCIENCE SHORT COURSE—FIRST TERM.

Alida Olive Anderson,	Waterville, Marshall.
Mabel Elizabeth Anderson,	Hartford, Lyon.
Alta Baxter,	Flush, Pottawatomie.
Blanche Bowman,	Council Grove, Morris.
Isabella Bertha Carroll,	Manhattan, Riley.
Bessie E. Cole,	Arlington, Reno.
Allan Elizabeth Cooper,	Manhattan, Riley.
Nannie Eck,	White City, Morris.
Ella Anne Elliott,	Leon, Butler.
Margaret Gertrude Going,	Topeka, Shawnee.
Celia Blanche Goss,	Dwight, Morris.
Estelle Goss,	Dwight, Morris.
Estella Rosetta Harrison,	Manhattan, Riley.
Clara Horst,	Holyrood, Ellsworth.
Anna Sophia Johnson,	White City, Morris.

Name.	Post-office and county (or state).
Ida Regina Johnson,	Leonardville, Riley.
Ruth Agnes Johnson,	Olsburg, Pottawatomie.
Edythe Katze,	Seneca, Nemaha.
Lillian Goldie Key,	Admire, Leon.
Mary Kroesch,	Lorraine, Ellsworth.
Cora Kunze,	Winkler, Riley.
Esther Linquist,	Garrison, Pottawatomie.
Catherine Margaret McCarthy,	Minneapolis, Ottawa.
Emma Frances Nelson,	Minneapolis, Ottawa.
Jennie Olivia Nelson,	Burdick, Morris.
Selma E. Nelson,	Randolph, Riley.
Olga Marie Peterson,	Waterville, Marshall.
May Daisy Price,	Clay Center, Clay.
Amy Ethel Reynolds,	Hollenberg, Washington.
Anna B. Snyder,	Durham, Marion.
Ida F. Snyder,	Durham, Marion.
Lydia Stracke,	Lorraine, Ellsworth.
Dollie Swartz,	Dwight, Morris.
Elizabeth Wilson,	Manhattan, Riley.
Emma Zwink,	Geneseo, Rice.
Mary Zwink,	Geneseo, Rice.

DOMESTIC SCIENCE—SUMMER TERM.

Eva Irene Alspaugh,	Lincolnville, Marion.
Jessie Mabel Alvord,	Zurich, Rooks.
Julia Baker,	Cherryvale, Montgomery.
Elizabeth Ball,	Hays, Ellis.
Madelene Ball,	Hays, Ellis.
Hulda L. J. Bennett,	Manhattan, Riley.
Nannie Carnahan,	Stockdale, Riley.
Florence Carpenter,	Woodsdale, Stevens.
Edna E. Cockrell,	Oswego, Labette.
Grace C. Crofoot,	Wilson, Ellsworth.
Corda Dixon,	Manhattan, Riley.
Leila Dunton,	Lebanon, Smith.
Mary Amy Elder,	Osage City, Osage.
Mabel White Epling,	Manhattan, Riley.
Esther E. Ericson,	Manhattan, Riley.
Marie Fenton,	Neenah, *Wisconsin.*
Mary G. Fisher,	Manhattan, Riley.
Helen H. Halm,	Topeka, Shawnee.
Maude Harris,	Havensville, Wabaunsee.
Vera E. Holloway,	Yates Center, Woodson.
Edith Holmberg,	Manhattan, Riley.
Mabelle Howell,	Manhattan, Riley.
Minnie Howell,	Manhattan, Riley.
Estella May Ise,	Downs, Osborne.
Actea Kennedy,	Topeka, Shawnee.
Ada Kennedy,	Topeka, Shawnee.
Venus Kimble,	Keats, Riley.
Amanda C. Kittell,	McPherson, McPherson.
Elizabeth M. Kramer,	Kansas City, Wyandotte.
Elsie Kratzinger,	Manhattan, Riley.
Anna M. Larson,	Lindsborg, McPherson.
Grace Elizabeth Leuszler,	Washington, Washington.
Gertrude Muriel McCheyne,	Manhattan, Riley.
Anna Minert,	Bennington, Ottawa.
Nellie C. Mitchell,	Manhattan, Riley.
Grace Norris,	Kansas City, Wyandotte.

Name.	Post-office and county (or state).
Charlotte Augusta Morton,	Tescott, Ottawa.
Edna Anna Munger,	Manhattan, Riley.
Dorothy Myers,	Manhattan, Riley.
Ella Nolan,	Lanham, (Washington).
Johanna M. L. Nolan,	Lanham, (Washington).
Lulu Moore Porter,	Holton, Jackson.
Leaffa Laura Randall,	Manhattan, Riley.
Eva Bell Redmon,	Overbrook, Osage.
Genevieve Louise Riddle,	Minneapolis, Ottawa.
Lynnie Sandborn,	Jewell, Jewell.
Minnie Schorer,	Clyde, Cloud.
Kathleen Selby,	Manhattan, Riley.
Esther Metta Sieder,	Enterprise, Dickinson.
Myrtle Simpson,	Talmage, Dickinson.
Katie Minnie Sitterley,	Manhattan, Riley.
Lois A. Sitterley,	Manhattan, Riley.
Alice Skinner,	Topeka, Shawnee.
Mabel Skinner,	Belvue, Pottawatomie.
Hallie M. Smith,	Manhattan, Riley.
Olive Marguerite Smith,	Waverly, Coffey.
Gladys Stewart,	Marysville, Marshall.
Julia Madge Stone,	Hays, Ellis.
Nellie L. Thompson,	Manhattan, Riley.
Elsie May Tulloss,	Ottawa, Franklin.
Alberta Wenkheimer,	Belpre, (Pawnee).
Pauline Emilie Wetzig,	Winkler, Riley.
Chloe May Willis,	Manhattan, Riley.
Clara Willis,	Manhattan, Riley.
Frances Odell Wilson,	Ingalls, Gray.

SUMMARY.

CLASSES.	Men.	Women.	Total.
Graduate	10	16	26
Senior	90	58	148
Junior	132	70	202
Sophomore	266	91	357
Freshman	307	143	450
Sub-freshman	363	165	528
Preparatory	105	29	134
Special	18	24	42
Dairy	26	.....	26
Farmers' Short Course	173	.....	173
Domestic Science Short Course	1	187	188
Counted Twice	29	53	82
Totals	1,462	730	2,192

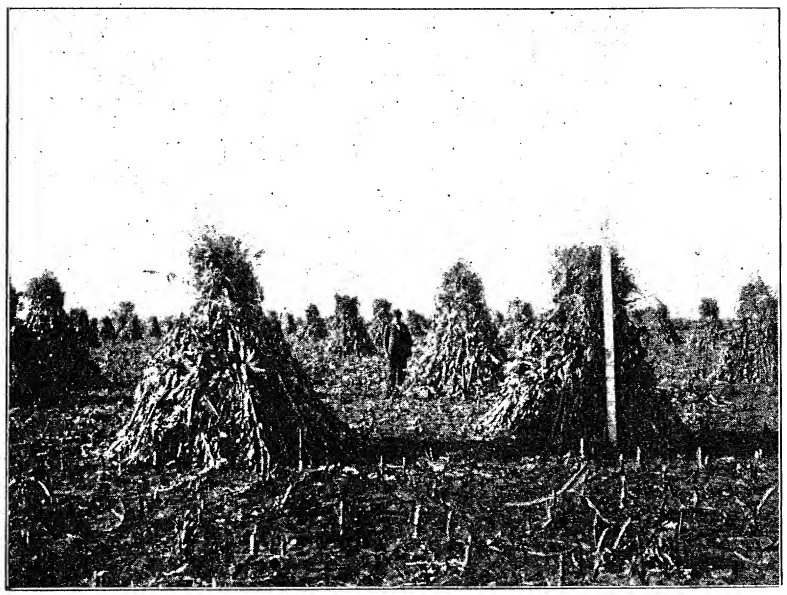
From 99 counties of Kansas, 2166.
From 10 other states, 18; Philippine islands, 8.

RECORD OF ATTENDANCE.

1879–1908.

COLLEGE YEAR.	Domestic science short course	Farmers' short course	Dairy	Apprentice	Special	Preparatory	Sub-freshman	Freshman	Sophomore	Junior	Senior	Postgraduate	Counted twice	Total	Graduated
1878–79	.....	.....	....	....	1	.....	.....	89	89	16	12	....	....	207	9
1879–80†	.....	.....	....	....	1	.....	.....	166	61	35	11	2	....	276	7
1880–81‡	.....	.....	....	....	6	.....	.....	178	48	24	9	2	....	267	8
1881–82	.....	.....	....	....	5	.....	.....	227	50	19	11	....	....	312	9
1882–83	.....	.....	....	....	4	.....	.....	241	60	30	12	....	....	347	12
1883–84	.....	.....	....	....	2	.....	.....	255	92	26	18	2	....	395	17
1884–85	.....	.....	....	....	2	.....	.....	271	71	36	16	5	....	401	14
1885–86	.....	.....	....	....	1	.....	.....	273	91	35	24	4	....	428	21
1886–87	.....	.....	....	....	....	.....	.....	303	100	44	24	10	....	481	21
1887–88	.....	.....	....	....	....	.....	.....	305	92	46	27	2	....	472	22
1888–89†	.....	.....	....	....	....	.....	.....	266	103	41	28	7	....	445	25
1889–90	.....	.....	....	....	1	.....	.....	307	105	63	28	10	....	514	27
1890–91†	.....	.....	....	....	....	.....	.....	343	135	50	53	12	....	593	52
1891–92	.....	.....	....	....	....	.....	.....	336	139	62	37	10	....	584	35
1892–93	.....	.....	....	....	...	.....	.....	339	110	66	43	29	....	587	39
1893–94	.....	.....	....	....	....	.....	.....	275	141	72	42	25	....	555	39
1894–95	.....	.....	....	....	5	.....	.....	276	108	89	64	30	....	572	57
1895–96	.....	.....	....	....	3	.....	.....	353	121	67	71	32	....	647	66
1896–97*	.....	.....	....	....	6	67	.....	321	163	69	62	46	....	734	55
1897–98	.....	.....	6	9	15	77	.....	316	174	77	82	57	10	803	69
1898–99	.....	.....	26	35	40	110	.....	306	177	92	65	40	21	870	53
1899–1900†	24	47	57	50	32	162	.....	376	163	109	69	27	22	1094	58
†900–01	47	109	72	79	23	318	.....	348	183	80	74	40	52	1321	60
†901–02	41	125	66	87	19	298	.....	396	206	120	65	32	59	1396	52
†902–03	63	123	38	78	36	342	.....	471	229	141	86	24	57	1574	55
†903–04†	51	122	16	72	33	443	.....	403	206	161	114	20	36	1605	102
†904–05†	88	99	24	12	30	500	.....	289	198	122	117	26	43	1462	107
†905–06	92	118	28	....	46	598	.....	373	214	145	110	30	64	1690	96
†906–07	134	179	23	....	48	144	511	411	269	149	133	24	88	1937	118
†907–08	188	173	26	....	42	134	528	450	357	202	148	26	82	2192	....

* Previous to 1896–'97 the preparatory students were not listed separately from the first-years.
† Requirements for admittance raised. ‡ Course strengthened.



"When the fodder is in the shock."

(Out here in Kansas.)

GRADUATES.

This list is made from the best data obtainable. A favor will be conferred by notifying the College Secretary of any errors or changes.

1867.

Henry L. Denison, A. M., 14 Corona flats, Denver, Colo. Stenographer county court.
Belle M. (Haines) Pond, A. M. Died in 1905.
Emma Laura (Haines) Bowen, A. M., 1401 Humboldt street, Manhattan, Kan. Field secretary W. B. M. I.
John J. Points, A. M., 2201 Douglas street, Omaha, Neb. Attorney at law.
Martha A. (White) Abbott, A. M., 288 Oakley boulevard, Chicago, Ill. Housewife.

1871.

Emily M. (Campbell) Robinson, A. B. Died in 1877.
Ellen F. (Denison) Whedon, A. B., 1845 D street, Lincoln, Neb. Housewife.
Luella M. Houston, A. B., 1216 South Tenth street, Denver, Colo. Music teacher.
Charles O. Whedon, B. S., 1845 D street, Lincoln, Neb. Attorney at law.
Kate E. (White) Turley, A. B., 973 Jackson boulevard, Chicago, Ill. Housewife.

1872.

Theophania M. (Haines) Huntington, A. B. Died in 1880.
Albert Todd, A. M., Washington, D. C. Lieutenant-colonel, general staff, United States army.
Samuel Wendell Williston, A. M., M. D., Ph. D., Walker Museum, University of Chicago, Chicago, Ill. Professor of paleontology.

1873.

Eliza Z. (Davis) Stringfield, A. B., 1111 Santee street, Los Angeles, Cal. Housewife.
Sam Kimble, A. B., Manhattan, Kan. Judge twenty-first district.

1874.

Harry A. Brous, A. M., M. D. Died in 1906.
Edgar F. Clark, A. B.
John E. Davis, B. S., D. D. S., 1143 Oak street, Columbus, Ohio. Dentist.
William D. Gilbert, A. B. Government inspector of rural mail routes.
A. Judson White, A. B., 288 Oakley boulevard, Chicago, Ill. Minister.

1875.

Reuben E. Lofinck, B. S., Manhattan, Kan. Merchant.
Alice E. (Stewart) Points, A. M., 84 Storm avenue, Jersey City, N. J. Teacher city schools.

1876.

George A. Gale, A. B., box 395, West Palm Beach, Fla. Poultry- and fruit-raiser.
Ella M. (Gale) Kedzie, A. B., Oakwood, Agricultural College, Mich. Teacher of art.
Carrie M. Kimball, A. B., R. F. D. No. 2, Santa Ana, Cal. Housekeeper.
Nellie (Sawyer) Kedzie-Jones, M. S., 421 Pearl street, Kalamazoo, Mich. House wife.
Minerva E. (Whitman) Heiser, A. B., Lyndon, Kan. Housewife.

1877.*

Ella S. (Child) Carroll, Manhattan, Kan. Housewife.
George H. Failyer, M. S., bureau of soils, Washington, D. C. Scientist in bureau of soils, United States Department of Agriculture.
John S. Griffing, M. S., R. F. D. No. 16, Tecumseh, Kan. Farmer.
Walter Cyrus Howard, B. D., 721 Monterey street, Hollister, Cal. Minister.
Frederick O. Hoyt, M. D. Died in 1884.
Louis E. Humphrey, Chapman, Kan. Druggist.
James F. La Tourrette, Sitka, Alaska. Missionary.
Marion Franklin Leasure, LL. B., La Cygne, Kan. Attorney at law.
William Ulrich, M. S., Chautauqua, Ill.

* B. S. has been granted all graduates since 1877.

1878.

Albert N. Godfrey, M. S., box 272, Port Townsend, Wash. Civil engineer. County surveyor and acting city engineer.
Charles S. McConnell. Died in 1902.
George S. Platt. Died in 1878.
Amos E. Wilson, 1008 S. Fourth street, Leavenworth, Kan. Cashier First National Bank, and president Missouri Valley Bridge and Iron Company.

1879.

Arthur T. Blaine, Duarte, Cal. Fruit-grower.
Etta (Campbell) Blain, Duarte, Cal. Housewife.
Wilmer K. Eckman, Longview, Tex. Bank cashier.
Corwin J. Reed, R. F. D. No. 1, Havensville, Kan. Farmer.
Harry C. Rushmore, 357 Waverly street, Kansas City, Kan. Traveling salesman for Norvell-Shapleigh Hardware Company.
Lewis A. Salter, Carmen, Okla. Editor Carmen *Headlight,* and lawyer.
Wm. H. Sikes, Leonardville, Kan. Merchant.
Ella (Vincent) McCormick, Clay Center, Kan. Housewife.
Clarence E. Wood, A. B., Cherokee, Okla. Editor.

1880.

Augustine Beacham. Died about 1890.
Lizzie R. (Cox) Kregar, 503 W. First street, Junction City, Kan. Housewife.
Emma (Hoyt) Turner, 524 S. Eddy street, Fort Scott, Kan. Housewife.
Emma (Knostman) Huse, Manhattan, Kan. Housewife.
Grace (Parker) Perry, box 85, Pocatello, Idaho. Housewife.
Noble Asa Richardson, 780 Fifth street, San Bernardino, Cal. Merchant.
Marie E. (Sickels) Davis. Died in 1894.

1881.

Flora (Donaldson) Reed, R. F. D. No. 1, Havensville, Kan. Housewife and journalist.
Ulysses Grant Houston, Amherst, Mass. Lecturer on Bible lands, archæology and antiquities.
Fletcher M. Jeffery, 747 New York block, Seattle, Wash. Lawyer.
William J. Jeffery. Died in 1900.
Darwin S. Leach, box 726, San Juan, Porto Rico.
William J. Lightfoot, 519 Osage street, Manhattan, Kan. United States examiner of surveys and special disbursing agent, Department of the Interior.
Dalinda (Mason) Cotey, 341 West avenue 53, Los Angeles, Cal.
Wirt S. Myers, Warrington. Fla. Pattern-maker in department of steam engineering, Pensacola navy-yard.

1882.

J. Chester Allen. Died in 1885.
Ida (Cranford) Sloan, 2524 Gould avenue, N. Fort Worth, Tex. Housewife.
Edward V. Cripps.
Warren Knaus, M. S., 512 S. Main street, McPherson, Kan. Editor and proprietor of *Democrat.*
Mattie E. (Mails) Coons, Manhattan, Kan. Housewife.
Allie S. (Peckham) Cordry, 1725 Appleton avenue, Parsons, Kan. Housewife.
Belle (Selby) Curtice, The Baltimore, Kansas City, Mo. Housewife.
Burton L. Short, 47 N. Valley street, Kansas City, Kan. Assistant postmaster.
John A. Sloan, M. D. V., N. Fort Worth, Tex. United States meat inspector.

1883.

James W. Berry, Jewell, Kan. Lumberman.
Mary C. (Bower) Ady, Manhattan, Kan. Housewife.
Lewis W. Call, LL. B., LL. M., D. C. L., 1448 Newton street N. W., Washington, D. C. Chief clerk and solicitor, judge-advocate general's office, United States War Department.
Emma E. Glossop, 505 North Tenth street, St. Joseph, Mo. Journalist.
William J. Griffing, R. F. D. No. 1, Manhattan, Kan. Farmer and fruit-grower.
Phœbe E. (Haines) McKeen, M. S., 1401 Humboldt street, Manhattan, Kan. Housewife.
Hortense L. (Houston) Martin, 501 Nebraska street, Warren avenue, Miami, Okla. Housewife.
Jacob Lund, M. S., Manhattan, Kan. Superintendent of heat and power department, Kansas State Agricultural College.
Katie I. (Meguire) Sheldon.
J. Dana Needham, Lane, Kan. Merchant.
Milan T. Ward, M. D., Toulon, Ill. Physician.
Julius T. Willard, M. S., Manhattan, Kan. Professor of chemistry, Kansas State Agricultural College.

1884.

Emmett S. Andress, Lakin, Kan. Farmer.
Florence J. (Brous) Smalley, 608 Freeman avenue, Kansas City, Kan. Housewife.
Bartholomew Buchli, M. S., D. V. M., Alma, Kan. Farmer and stockman; county commissioner.
John H. Calvin, LL. D. Died in 1898.
William A. Corey, 207 New High street, Los Angeles, Cal. Organizer Socialist party and associate editor of *Common Sense*.
Henry M. Cottrell, M. S., 821 Peterson street, Fort Collins, Colo. Superintendent of farmers' institutes and agricultural college extension work.
Carrie F. (Donaldson) Brown. Died in 1902.
Florence A. Donaldson. Died in August, 1888.
Frank W. Dunn, Holtville, Imperial county, Cal. Vineyardist.
I. Day Gardiner. Died in 1899.
Edwin H. Kern, 528 Main street, Grand Junction, Colo. Civil engineer.
Marion M. Lewis. Died in 1895.
Charles L. Marlatt, M. S., 1440 Massachusetts avenue, N. W., Washington, D. C. Entomologist in charge of experimental field-work, United States Department of Agriculture.
Lincoln H. Neiswender, R. F. D. No. 6, North Topeka, Kan. Farmer and stock-raiser
Geo. C. Peck, Jewell, Kan. Manager Post-office News Agency.
Hattie L. (Peck) Berry, Jewell, Kan. Housewife.
John W. Shartel, Oklahoma City, Okla. Lawyer.

1885.

Thomas Bassler. Died in 1907.
Albert Deitz, 2747 Holly street, Kansas City, Mo. Grocer, meat dealer and fruit farmer.
Geo. E. Hopper, M. S., Manhattan, Kan. Contractor.
Florence F. Hough.
Frank A. Hutto, M. S., Ph. D., Twin Falls, Idaho. Attorney at law.
J. Allen Lewis, M. S., C. E. Died in 1907.
Nellie J. Murphy, Sterling, Kan. Graduate nurse.
Arthur L. Noyes, R. F. D. No. 1, Zeandale, Kan. Farmer and stock-raiser.
Clarence D. Pratt, 345 Elm street, Dallas, Tex. Secretary Lincoln Paint and Color Company.
Rollin R. Rees, Minneapolis, Kan. District judge.
Frederick J. Rogers, M. S., 4 Lasnen street, Stanford University, Cal. Assistant professor of physics, Leland Stanford Jr. University.
Dorothy E. C. (Secrest) Hungerford, Manhattan, Kan. Housewife.
Grace L. (Wonsetler) Rude, M. D., R. F. D. No. 1, Hoisington, Kan. Physician and housewife.
Effie E. (Woods) Shartel, Oklahoma City, Okla. Housewife.

1886.

Lillie B. Bridgman, M. S., 1715 Boute avenue, Berkeley, Cal. Instructor in physics, California School of Mechanical Arts.
Louis P. Brous, M. S., 1011 Barnett avenue, Kansas City, Kan. Teacher of mechanical drawing in manual-training high school, Kansas City, Mo.
Paul Halstead Fairchild, M. D., 60 Berkman street, New York city. President Pulvola Chemical Company, manufacturing chemists.
Abbott M. Green, Lookout, Cal. Surveyor and civil engineer.
James G. Harbord, M. S., Manila, P. I. Colonel United States army, assistant chief Philippine constabulary.
John U. Higinbotham, Washington boulevard and Morgan street, Chicago, Ill. Assistant treasurer of National Biscuit Company.
Maria C. (Hopper) Getty, Downs, Kan. Housewife.
E. Ada (Little) MacEwan, 314 Elm street, Kalamazoo, Mich. Housewife.
Frank L. Parker, Hutchinson, Kan. Stock-raiser and fruit-grower.
Edward H. Perry, Plainview, Tex. Real-estate broker and ranchman.
H. Augustus Platt. Died in 1903.
Ada H. (Quinby) Perry, Plainview, Tex. Housewife.
Ida H. (Quinby) Gardiner, 1514 Laguna street, Santa Barbara, Cal. Housewife.
Minnie Reed, M. S., Kamehameha manual school, Honolulu, H. I. Teaching science in manual-training school for boys; conducting botanical research work for United States experiment station of Hawaii.
David G. Robertson, 153 La Salle, street, Chicago, Ill. Lawyer.
Edward O. Sisson, A. B., Ph. D., 4333 Ninth avenue, Seattle, Wash. Professor of education, University of Washington.
John W. Van Deventer, Sterling, Colo. Editor *Republican Advocate*.
George W. Waters. Died in 1908.
William E. Wholey, 117 Maroon Heights, Chicago, Ill. Instructor, University of Chicago.
F. Henrietta (Willard) Calvin, Manhattan, Kan. Professor of domestic science, Kansas State Agricultural College.
John L. Wise, Greenville, Ill. Dealer in hay and live stock.

1887.

Edgar A. Allen, U. S. Indian office, Washington, D. C. Special United States Indian agent.
Fred H. Avery. Died in 1896.
Claude M. Breese, M. S., 318 Leavenworth street, Manhattan, Kan. Assistant cashier, First National Bank.
John B. Brown, M. S., Morris, Minn. Superintendent Indian training-school.
Walter J. G. Burtis, R. F. D. No. 2, Fredonia, Kan. Farmer and stock-breeder.
Mark A. Carleton, M. S., 1346 Newton street, Washington, D. C. Cerealist in charge of grain investigations, bureau of plant industry, United States Department of Agriculture.
Nellie E. (Cottrell) Stiles, R. F. D. No. 2, Fullerton, Cal. Housewife.
Bert R. Elliott, Dawson City, British Yukon Territory. Miner.
Frederick B. Elliott, 219 Poyntz avenue, Manhattan, Kan. Real-estate and insurance agent.
Clara M. (Keyes) Graham, box 250, Manila, P. I. Teacher.
Fred G. Kimball, Lunoko, Alaska. Miner.
Frederick A. Marlatt, Manhattan, Kan. Proprietor Blue Valley Manufacturing Company.
William J. McLaughlin, 463 W. Sixth South street, Salt Lake City, Utah. License clerk in city recorder's office and assistant clerk to city council.
Mary E. Moses. Died in 1906.
Charles A. Murphy, Nickerson, Kan. Editor and publisher of the *Argosy*.
Orlando G. Palmer, LL. M., Fort Riley, Kan. Second lieutenant, Seventh United States cavalry.
Louis B. Parker. Died in 1889.
James E. Payne, M. S., Akron, Colo. Superintendent U. S. Experiment Station.
Seward N. Peck, 1030 Railway Exchange building, Chicago, Ill. Chief draftsman for A. T. & S. F. railway system.
George N. Thompson, Belmond, Iowa. General mechanic.
Willis M. Wright, Thornwell, La. Engineer.

1888.

Grant Arnold, Seattle, Wash. Salesman, with Miles Paper Company.
Bertha H. (Bacheller) Foster, M. S., 26 South 16th street, Kansas City, Kan. Housewife, and manager Hillcrest Farm Company, 3114 Main street, Kansas City, Mo.
Clement G. Clark, 601 Sixth street, S. E., Minneapolis, Minn. Pastor of First Congregational church.
Alexander C. Cobb, Wagoner, Okla. Contractor and farmer.
Mattie (Cobb) Clark, 601 Sixth street, S. E., Minneapolis, Minn. Housewife.
Minnie H. Cowell, Steyning, Sussex, England. Certificated nurse.
Lyman H. Dixon, 11 East Twenty-fourth street, New York city. Architect.
David G. Fairchild, M. S., Washington, D. C. Agricultural explorer, in charge of foreign explorations, United States Department of Agriculture.
Carl E. Friend, Soldier, Kan. Lumberman.
John R. Harrison, Post-office Department building, Washington, D. C. Post-office inspector in charge of Washington division.
Humphrey W. Jones, 1251 Lincoln street, Topeka, Kan. Principal of Branner school.
Nathan E. Lewis, 1003 High street, Youngstown, Ohio. Mechanical engineer.
Abby L. Marlatt, M. S., technical high school, Providence, R. I. Teacher of household economics.
William C. Moore, lock box 357, Parsons, Kan. Breeder of registered Jersey cattle.
Ernest F. Nichols, M. S., D. Sc., 430 W. 118th street, New York, N. Y. Professor of experimental physics in Columbia University.
Harry E. Robb, Eureka, Kan. Farmer and county surveyor.
Anna Snyder, Lebo, Kan. Telephone exchange.
Edwin H. Snyder, 2825 Wyandotte street, Denver Colo. Editor and publisher.
Oliver L. Utter, A. B., A. M., S. T. B., 121 South Yellow Springs street, Springfield, Ohio. Minister.
Aaron Walters. Died in 1892.
Lora L. (Waters) Beeler, M. S., Glen Ellyn, Ill. Housewife.
Daniel Webster Working, 20 Willey driveway, Morgantown, W. Va. Superintendent agricultural extension work, West Virginia University.

1889.

Emma A. Allen. Died in 1891.
Joseph W. Bayles, A. B., Onaga, Kan. Minister.
Walter R. Browning, Padonia, Kan. Grain dealer.
David E. Bundy, box 176, Farmington, N. M. Missionary to Navahoe Indians.
Samuel S. Cobb, Wagoner, Okla. Postmaster and publisher.
Judson H. Criswell, 209 Pearl street, Ames, Iowa. Assistant, farm crops, Iowa State College.
Mattie I. (Farley) Carr, R. F. D. No. 1, Kent, Wash. Housewife.
Clarence E. Freeman, M. S., E. E., 1015 E. Fifty-ninth street, Chicago, Ill. Director of department of electrical engineering, Armour Institute of Technology.
Hattie L. (Gale) Sanders, West Palm Beach, Fla. Housewife.
John S. Hazen, Springfield, Mo. Local forecaster, United States weather bureau.
Albert B. Kimball, Scandia, Kan. Publisher Scandia *Journal*.

William Knabb, 301 N. Second street, Hiawatha, Kan. Cashier First National Bank.
Mary Cornelia Lee, Manhattan, Kan. City librarian.
Alonzo A. Mills, Anaheim, Cal. Proprietor of Walnut Nursery.
Susan W. (Nichols) Eshelman, 926 Felix street, St. Joseph, Mo. Housewife.
Walter H. Olin, M. S., 829 Peterson street, Fort Collins, Colo. Vice-dean of agriculture and professor of agronomy, Colorado Agricultural College.
Eli M. Paddleford, A. B., S. T. B., Lenexa, Kan. Minister.
Maude F. (Sayers) DeLand, Women's Medical College, Philadelphia, Pa. Medical student.
Florine (Secrest) Linderman, Capay, Yolo county, California. Housewife.
Stanley Snyder, Oskaloosa, Kan. Farmer.
Charles W. Thompson, D. D. S., Holton, Kan. Dentist.
Jane Chapin Tunnell, 5458 Greenwood avenue, Chicago, Ill. Teacher of English, Hyde Park high school.
Ina M. (Turner) Bruce, 3857*a* Juniata street, St. Louis, Mo. Housewife.
Robert U. Waldraven, Farmington, N. M. Minister.
Henry S. Willard, M. D., Manhattan, Kan. Physician and druggist.

1890.

Samuel I. Borton, 507 Fourth street, Lamar, Colo. Chief agriculturist, American Beet Sugar Company.
Frank A. Compbell, B. A., 525 Kansas avenue, Topeka, Kan. Sign-writer.
Arthur Fulton Cranston, LL. B., Central avenue, Parsons, Kan. Attorney at law.
John Davis, Yale, Okla. Principal consolidated schools.
Grant W. Dewey, 423 East Forty-seventh street, Chicago, Ill. Photographer.
Charles J. Dobbs, 1062 Empire block, Seattle, Wash. Attorney at law.
Charles W. Earle, 1942-1948 Curtis street, Denver, Colo. Signs.
Schuyler C. Harner, Keats, Kan. Merchant and postmaster.
John W. Ijams, Cache, Okla. Assistant cashier, Bank of Cache.
Bertha S. (Kimball) Dickens, M. S., Manhattan, Kan. Housewife.
Eusebia (Knipe) Curtis, 841 Garfield avenue, Kansas City, Kan. Housewife.
Nellie P. (Little) Dobbs, 1062 Empire block, Seattle, Wash. Housewife.
Ellsworth Thomas Martin, LL. B., 1402-100 Washington street, Chicago, Ill. Lawyer.
Silas C. Mason, M. S., Berea, Ky. Arboriculturist in dry-land agriculture, bureau of plant industry, United States Department of Agriculture.
Wilton L. Morse, Mancos, Colo. Principal of school.
Albert E. Newman, Texas City, Tex. Custom-house official.
Julia R. Pearce, Washington, D. C. Scientist, physical laboratory, bureau of plant industry, United States Department of Agriculture.
Emil C. Pfuetze, Manhattan, Kan. Lumber dealer.
William H. Sanders, care of dredge "Tomoka," St. Augustine, Fla. Dredge captain.
Emma Secrest, A. M. Died in 1898.
Marie Barbara (Senn) Heath, M. S., 3427 Colby avenue, Everett, Wash. Housewife.
Ralph Snyder, Oskaloosa, Kan. Farmer and stockman.
George E. Stoker, A. B., Columbian building, Topeka, Kan. Lawyer.
Walter T. Swingle, M. S., 3315 Seventeenth street, N. W., Washington, D. C. Physiologist in charge plant life-history investigations, bureau of plant industry, United States Department of Agriculture.
Gilbert J. VanZile. Died in 1899.
Harry Nichols Whitford, M. S., Ph. D., bureau of forestry, Manila, P. I. In charge of division of forest products, Bureau of Forestry.
Thomas E. Wimer. Died in 1890.

1891.

William Aaron Anderson, 4218 W. Prospect Place, Kansas City, Mo. Assistant general sales manager, the Long-Bell Lumber Company.
William Sherman Arbuthnot, D. V. S., Lebanon, Kan. Druggist.
Herman Willard Avery, R. F. D. No. 2, Wakefield, Kan. Farmer and breeder of Percheron horses.
Judd Noble Bridgman, M. S., A. B., 1224 Quindaro boulevard, Kansas City, Kan. Civil engineer.
Robert James Brock, Manhattan, Kan. Lawyer.
Francis Charles Burtis, M. S., 822 Irving street, Muskogee, Okla. Seed merchant.
Charles Albert Compbell, 1728 Williams street, Denver, Colo. Clergyman.
Spencer Norman Chaffee, M. D., Talmage, Kan. Physician and surgeon.
Clay Ephraim Coburn, M. D., 908 Orville avenue, Kansas City, Kan. Physician.
Gertrude (Coburn) Jessup, 513 West Sixth avenue, Columbus, Ohio. Housewife.
Tina Louise (Coburn) Tomson, 111 North Sixteenth street, Cedar Rapids, Iowa. Housewife.
Rachel Callie (Conwell) Thoburn, 906 West Twenty-first street, Oklahoma City, Okla. Housewife.
Christine Mossman Corlett, R. F. D. No. 2, Guthrie, Okla. Teacher.
Mary Emmeline (Cottrell) Payne, M. S., Akron, Colo. Housewife.
Phil Sheridan Creager. Died in 1906.
Kary Cadmus Davis, M. S., Ph. D., Canton, N. Y. Dean of New York State School of Agriculture.
Thomas Clarke Davis, Benedict, Kan. Farmer and oil producer.
Helen Pearl (Dow) Peck, 309 Marlborough road, Brooklyn, N. Y. Housewife.
Anna (Fairchild) White, Claremont, Cal. Housewife.
Harry Benson Gilstrap, Chandler, Okla. Postmaster and publisher *News*.
Almon Arthur Gist, Fairfax, Okla. Agent A. T. & S. F. railway.

Amy Myrtle (Harrington) Deibler, 120 E. Tenth street, Leadville, Colo. Housewife.
Delpha May (Hoop) Montgomery, Manhattan, Kan. Housewife.
Mayme Amelia (Houghton) Brock, Manhattan, Kan. Housewife.
Willis Wesley Hutto, Manhattan, Kan. Teacher in city schools.
George Victor Johnson, Portales, N. M. Editor and proprietor Portales *Times*.
Frank Mullett Linscott, D. V. S., Farmington, Kan. Farmer.
Bessie Belle Little, M. S., M. D., Manhattan, Kan. Physician.
Albert Edward Martin, B. A. Died in 1906.
Nellie Evangeline (McDonald), Thayer. Died in 1902.
David Collins McDowell, Victor, Colo. Cashier Colorado Trading and Transfer Company.
Alfred Midgley, Minneapolis, Kan. Manager lumber-yard.
Madeleine Wade Milner, 522 College avenue, De Kalb, Ill. Librarian Northern Illinois State Normal School.
Paul Chambers Milner, Carbondale, Ill. Farmer.
Harry Elbridge Moore, care of Calhoun, Denny & Ewing, Alaska building, Seattle, Wash. Real-estate dealer.
John Otis Morse, Mound City, Kan. Lawyer.
Hattie May Noyes, 425 Moro street, Manhattan, Kan. Boarding-house keeper.
Louise (Reed) Paddleford, Lenexa, Kan. Housewife.
Artemus Jackson Rudy, R. F. D. No. 1, Oleander, Cal. Fruit-grower.
Henry Vernon Rudy, box 527, Fresno, Cal. Vineyardist, and president and manager Fresno Fruit Growers' Company.
Charlotte Jane (Short) Houser, M. S. [B. S., Dickinson College, Carlisle, Pa.], Lewiston, Pa. Housewife.
Ben Skinner, M. D., Wetmore, Kan. Physician and surgeon.
Caroline Scott (Stingley) Van Blarcom. Died in 1899.
Lillian Alice (St. John) Williams, 616 South Tenth street, Kansas City, Kan. Housewife.
Ellis Cheney Thayer, Helena, Mont. Draftsman, United States surveyor-general's office.
Sam L. Van Blarcom, 115 North Quincy avenue, Kansas City, Mo. Railway mail service.
Frank Albert Waugh, M. S., Amherst, Mass. Professor of horticulture and landscape-gardening, Massachusetts Agricultural College.
Fannie Elizabeth (Waugh) Davis, M. S., Canton, N. Y. Housewife.
Flora Emilie Wiest, Manhattan, Kan. Teacher in city schools.
Bertha (Winchip) Spilman, 324 Fifth street, S. E., Washington, D. C. Housewife.
Alfred Orrin Wright, Sugden, Okla. Editor of the Sugden *Herald*.
Effie Jeanetta Zimmerman, M. S., Moray, Kan. Teacher in Proctor Academy, Provo, Utah.

1892.

Grace Maria Clark, M. S. Died in 1904.
George L. Clothier, M. S., M. F., Washington, D. C. Field assistant, bureau of forestry, United States Department of Agriculture.
Lillian Clyde Criner, McPherson, Kan. Editor and publisher of *Opinion*.
Harry A. Darnall, box 45, Lents, Ore. Teacher and editor of Beaver State *Herald*, of Gresham, Ore.
William H. Edelblute, Rathdrum, Idaho. County surveyor; United States deputy mineral surveyor for Idaho.
Elizabeth (Edwards) Hartley, Manhattan, Kan. Housewife.
John Frost, R. F. D. No. 3, Blue Rapids, Kan. Farmer.
Effie (Gilstrap) Frazier, box 124, Chandler, Okla. Clerk in post-office.
Ava (Hamill) Tillotson, M. S., Latham, Kan. Pharmacist.
J N Harner. Died in 1897.
Loyall S. Harner, 1118 Hayes avenue, Colorado Springs, Colo. Mill chemist for Golden Cycle Mining and Milling Company.
Charles Pinckney Hartley, M. S., 3420 Center street, N. W., Washington, D. C. Physiologist in charge of corn breeding, United States Department of Agriculture.
John William Abraham Hartley, Manhattan, Kan. Farmer.
James Laird McDowell, McCammon, Idaho. Farmer and market-gardener.
Robert A. McIlvaine, Warmspring, Ore. Teacher in government Indian training school.
Kate (Oldham) Sisson, 190 West Eleventh avenue, Columbus, Ohio. Housewife.
Daniel Henry Otis, M. S., Madison, Wis. Assistant to the dean, college of agriculture, and associate professor of animal nutrition, University of Wisconsin.
Ivan Bryan Parker, M. D., Hill City, Kan. Physician and surgeon; president Graham County State Bank.
Warner S. Pope. Died in 1899.
Burton Homer Pugh, drawer C, Topeka, Kan. B. H. Pugh Manufacturing Company.
Elias Wilber Reed, M. D., Holton, Kan. Physician.
Robert Stirling Reed, Simpson, Kan. Miller.
Arthur Daniel Rice, Hubbell, Neb. Minister.
Fred C. Sears, M. S., Mount Pleasant, Amherst, Mass. Professor of pomology, Massachusetts Agricultural College.
Birdie E. Secrest, D. S., Randolph, Kan. Clerk.
May Secrest, 1306 Mill street, San Luis Obispo, Cal. Instructor in domestic science, California Polytechnic School.
Ruth Tipton (Stokes) Sears, M. S., Mount Pleasant, Amherst, Mass. Housewife.
Harry W. Stone. Y. M. C. A. building, Portland, Ore. General secretary, Y. M. C. A.

Walter Percival Tucker, Fundicion, Sonora, Mexico. Chief clerk, Pacific Smelting and Refining Company.
Mary Alice (Vail) Waugh, Amherst, Mass. Housewife.
Robert Lynn Wallis. Died in 1895.
Ora Rebecca (Wells) Traxler, 709 Constitution street, Emporia, Kan. Housewife.
Daniel F. Wickman, post-office box 107, Topeka, Kan. Nurseryman.
George Washington Wildin, care of New York, New Haven & Hartford railroad, New Haven, Conn. Mechanical superintendent of the New York, New Haven & Hartford railroad.
Charles Ernest Yeoman. Died in 1902.

1893.

Edmund Clarence Abbott, 235 Cerrillos road, Santa Fe, N. M. Assistant United States attorney, district of New Mexico.
Edwin McMaster Stanton Curtis.
Corinne Louise (Daly) Burtis, 822 Irving street, Muskogee, Okla. Housewife.
Laura Greeley Day, 1008 Eighth street, Menomonie, Wis. Director of department of domestic science and art, Stout training schools.
Ione (Dewey) Sutherland, 189 East Thirty-sixth street, Chicago, Ill. Stenographer.
Albert Dickens, M. S., Manhattan, Kan. Professor of horticulture, Kansas State Agricultural College.
Mary Maude (Gardiner) Obrecht, M. S., 1016 Nevada street, Urbana, Ill. Housewife.
Susie (Hall) Linscott, Farmington, Kan. Housewife.
Mary Frances Burgoyne Harmon, Kansas City, Kan. Teacher of drawing in Kansas City, Kan., high school.
Ivy Frances Harner, M. S., Lafayette, Ind. Professor of household economics, Purdue University.
Margaretha Elise Horn, 320 Vinewood avenue, Detroit, Mich. Teacher of biology in Western high school.
Mac F. Hulett, D. O., 8 East Broad street, Columbus, Ohio. Osteopathic physician.
Marcia Ione Hulett, D. O., Alamagordo, N. M. Osteopathic physician.
Fred Hulse, Manhattan, Kan. Carpenter and building foreman.
Charles Augustus Kimball, Manhattan, Kan. Editor.
Maud Ethel (Knickerbocker) Pyles, 1145 Village Deep, Johannesburg, South Africa. Housewife.
Thomas Eddy Lyon, LL. B., Sangamon Loan and Trust building, Springfield, Ill. Lawyer.
William Otis Lyon. Died in 1907.
McLeod Wilson McCrea, 523 East Third street, Santa Ana, Cal. Clerk.
Rose Edith McDowell, 1008 Eighth street, Menomonie, Wis. Student, Stout Manual-training School.
George Lane Melton, Ph. B., 445 Fifty-sixth street, Chicago, Ill. Business man.
Eusebia Delong (Mudge) Thompson, Marysville, Kan. Manager of the Thompson Hardware Company.
Nora (Newell) Hatch, R. F. D. No. 2, Manhattan, Kan. Housewife.
August Fred. Niemoller, Wakefield, Kan. Miller.
Susie Amanda Noyes. Died in 1894.
Henry Leamer Pellett, D. O., R. F. D. No. 4, Eudora, Kan. Breeder Red Polled cattle and farmer.
Charles John Peterson, Topeka, Kan.
Carl Frederic Pfuetze, Manhattan, Kan. Lumber merchant.
John Dewitt Riddell, M. D., Enterprise, Kan. Physician and surgeon.
John Albert Rokes, 617 Marion building, Seattle, Wash. Lawyer.
Agnes (Romick) Edgar, Kelseyville, Cal. Housewife.
Fred Raymond Smith, 431 Kearney street, Manhattan, Kan. Court reporter twenty-first judicial district.
George Wildman Smith, M. D., 1103 Main street, Kansas City, Mo. Physician and surgeon.
William Elmer Smith, Independence, Mo. Lawyer; deputy clerk of circuit court of Jackson county.
John Eugene Thackrey, S. T. B., 7400 Flora avenue, Maplewood, Mo. Minister.
Joseph B. Thoburn, 906 West Twenty-first street, Oklahoma City, Okla. Editor and publisher of an agricultural newspaper.
Charles Henry Thompson, M. S., St. Louis, Mo. In charge of the succulent plants, Missouri Botanical Garden.
George K. Thompson. Died in 1905.
William James Yoeman, La Crosse, Kan. Farmer and stock-raiser.

1894.

Frank Weber Ames, room 316, Carnegie building, Pittsburg, Pa. Contract clerk, rail department, Carnegie Steel Company.
Clara Francelia Castle, M. S., Manhattan, Kan. At home.
George Luther Christensen, 115 Clark street, Houghton, Mich. Assistant professor in mechanical engineering, Michigan School of Mines.
John Cornelius Christensen, Manhattan, Kan. Deputy county treasurer.
Lorena Estella Clemons, Manhattan, Kan. Secretary Kansas State Agricultural College.
Martha Cottrell, R. F. D. No. 2, Fullerton, Cal.
Sarah Esther (Cottrell) Wright, Thornwell, La. Housewife.
Alverta May Cress, R. F. D. No. 7, Topeka, Kan. Teacher.

Fannie Jane Cress, 517 Ohio street, Wheaton, Ill. Teacher, Oak Park, Ill.
Earnest A. Donaven, M. D., Mount Hope, Kan. Physician.
Jephthah W. Evans, M. D., Council Grove, Kan. Physician and surgeon.
Isabelle Dussell (Frisbie) Criswell, 209 Pearl street, Ames, Iowa. Housewife.
Eugene Leonard Frowe. Died in 1898.
Walter Harling. Died in 1903.
Lorena Marguerite (Helder) Morse, 1100 W. Fortieth street, Kansas City, Mo. Housewife.
Mark V. Hester, Poete, Laguna, P. I. Supervising teacher, bureau of education, United States civil service.
Charles Ross Hutchings, box 132, San Luis Potosi, Mexico. Civil engineer.
Isaac Jones, jr., Etiwanda, Cal. Fruit-grower.
Stella Victoria (Kimball) Tucker, Fundicion, Sonora, Mexico. Housewife.
Mary Eliza (Lyman) Otis, M. S., Madison, Wis. Housewife.
William Henry Moore, Manhattan, Kan. Florist and horticulturist.
Sarah (Moore) Foster, 8057 Wallingford avenue, Seattle, Wash. Housewife.
James Francis Odle, Wamego, Kan. Farmer.
Charles Randolph Pearson, Hoxie, Kan. County treasurer.
Horace Greeley Pope, LL. B., 3510 E. Tenth street, Kansas City, Mo. Attorney at law, member of firm Bird & Pope.
Minnie Louise Romick, 567 N. Gordon street, Pomona, Cal. Teacher.
Winnie Luella (Romick) Chandler, R. F. D. No. 3, Swope Park, Kansas City, Mo. Housewife.
Victor Irvin Sandt, 119 E. Sanborn street, Winona, Minn. Supervisor of manual training in city schools.
John Alfred Scheel, R. F. D. No. 7, Emporia, Kan. Farmer and fruit-grower.
Jacob Ulrich Secrest, Randolph, Kan. Farmer.
Charles Chrisfield Smith, Petaluma, Cal. Real-estate agent.
Jennie Ruth (Smith) Strong, Osborne, Kan. Housewife.
Wesley Ohio Staver, 206-214 Federal building, Laredo, Tex. Immigrant inspector in charge of port of Laredo, Tex., United States immigration service.
John Stingley, 1316 N. Emporia street, Wichita, Kan. Traveling agent for Moline Plow Company.
John Edwin Taylor. Died in 1896.
Delbert L. Timbers, Osborne, Kan. Merchant.
Phebe Carey (Turner) Clothier, St. Marys, Kan. Housewife.
Samuel Robert Vincent, M. S., R. F. D. No. 2, Deer Creek, Okla. Farmer.
Lucy Helena Waters, A. M., Santa Monica, Cal. Teacher.

1895.

Edward Jones Abell, Riley, Kan. Farmer and stock-raiser.
Carl D. Adams, 405 East Santa Fe street, Olathe, Kan. Teacher in School for Deaf and Dumb.
Robert John Barnett, Manhattan, Kan. Principal of preparatory department, Kansas State Agricultural College.
Burton Wesley Conrad, D. V. S., Sabetha, Kan. Veterinarian.
Florence Ruth Corbett, M. S., department public charities, foot of East Twenty-sixth street, New York city. Dietitian to the department of public charities.
Sid Henry Creager, box 582, Cincinnati, Ohio. Lumberman.
Elsie Emeline (Crump) Ames, 1316 North Fifteenth street, Boise, Idaho. Housewife.
David Thomas Davies, Manhattan, Kan. Farmer.
Frank Andrew Dawley, Waldo, Kan. Farmer and stock-raiser.
Daisy Day, M. S., Onaga, Kan. At home.
Flora (Day) Barnett, M. S., Manhattan, Kan. Housewife.
George Adam Dean, M. S., Manhattan, Kan. Assistant in entomology, Kansas State Agricultural College.
Lillie Christena (Dial) Falin, Cleburne, Kan. Housewife.
Lucy Ellis, 705 Lane street, Topeka, Kan. Teacher of manual training.
Victor Emrick, 1034 E. Main street, Portland, Ore. Clerk, ticket auditor's office, Oregon Railway and Navigation Company.
George Forsyth, 201 S. Main street, Franklin, Ind. Traveling salesman, Dwiggins Wire Fence Company, Anderson, Ind.
Ernst Harrison Freeman, Armour Institute of Technology, Chicago, Ill. Assistant professor of electrical engineering, Armour Institute of Technology.
Florence Eleanor (Fryhofer) Webster, Vienna, Va. Housewife.
George William Fryhofer, 4428 Forest Park boulevard, St. Louis, Mo. Broker.
Oscar Hugo Halstead, M. S., 1014 Houston street, Manhattan, Kan. Secretary E. L. Knostman Clothing Company.
Hortensia (Harman) Patten, 207 N. Harvey avenue, Oak Park, Ill. Housewife.
John Bright Harman, Wigwam, Colo. Stockman.
Clarence V. Holsinger, R. F. D. No. 5, Rosedale, Kan. Horticulturist and nurseryman.
Christian Andrick Johnson, Success, Kan. Farmer and stock-raiser.
John James Johnson, M. D., Fifth and Osage streets, Porum, Okla. Physician.
Fred Ralph Jolly, Lake Arthur, N. M. Real estate.
William Irving Joss, M. D., 93 N. Sixth street, Newark, Ohio. Physician and surgeon.
Maud Estella (Kennett) Darnall, box 45, Lents, Ore. Teacher in Portland city schools.
Myron Arthur Limbocker, Pomona, Kan. Banker.

Samuel Alexander McDowell, care Colorado Trading and Transfer Company, Victor, Colo. Miner.
Laura Sarah (McKeen) Smith, Russell, Kan. Housewife.
Theo. Wattles Morse, M. S., 1100 W. Fortieth street, Kansas City, Mo. Publisher of agricultural paper.
Oscar Albert Otten, Hebron, Neb. Agent C. R. I. & P. Rly. Co.
William Hackworth Painter. Died in 1901.
Charles Wesley Pape, M. S., 918 L street, Lincoln, Neb. Chemist and bacteriologist for Beatrice Creamery Company.
Ethel (Patten) Ames, 616 Hale street, Pittsburg, Pa. Housewife.
John Vernon Patten, 207 N. Harvey avenue, Oak Park, Ill. Secretary and treasurer of Charles Smith Company.
William H. Phipps, 1209 Union avenue, Kansas City, Mo. Manager Empire Cream Separator Company.
Alice Julia (Quintard) Peck. Died in 1899.
Frederick Ellsworth Rader, Etiwanda, Calif. Fruit-grower.
Ralph Waldo Rader, 824 Madison street, Topeka, Kan. City bookkeeper for Crosby Brothers Mercantile Company.
Ada Rice, Manhattan, Kan. Instructor in English, Kansas State Agricultural College.
Benjamin Franklin Simeon Royer, M. D., 220 N. Grand avenue, Los Angeles, Cal. Physician and optician.
Charles Baxter Selby, Sterling, Okla. Attorney and United States court commissioner.
Mabel Gertrude (Selby) Laughlin, La Colorado, Sonora, Mexico. Housewife.
Ernest P. Smith, box 580, Globe, Ariz. Foundry foreman.
Frederick John Smith, Russell, Kan. Editor and county clerk.
Kitty Myrtle (Smith) Wheeler, Manhattan, Kan. Housewife.
Marietta (Smith) Reed, Holton, Kan. Housewife.
William Henry Steuart, Winchester, Kan. Farmer.
Cora Idella (Stump) Chaffee, Lasita, Kan. Housewife.
Dora (Thompson) Winter, 2303 Wabash avenue, Kansas City, Mo. Housewife.
Elven Creveling Trembly, R. F. D. No. 5, Council Grove, Kan. Farmer and stock-raiser.
George Carpenter Wheeler, Manhattan, Kan. Assistant in animal husbandry, Kansas State Agricultural College.
Mary Elizabeth (Willard) Emrick, 1034 E. Main street, Portland, Ore. Housewife.
Olive Mabel (Wilson) Holsinger, R. F. D. No. 5, Rosedale, Kan. Housewife.
Ora Gertrude Yenawine, 1317 N. Seventh street, Kansas City, Kan. Instructor in domestic science, Kansas City, Kan., high school.

1896.

May Haines (Bowen) Schoonover, A. B., Marietta, Ohio. Housewife.
Con Morrison Buck, M. S., Oskaloosa, Kan. President Oskaloosa Electric Light Company.
Margaret Isaphene (Carleton) Doane, Albert Lea, Minn. Housewife.
William Annesley Cavenaugh, Fort Douglass, Utah. Captain, Sixth United States infantry.
William Arthur Coe, Blackfoot, Idaho. Farmer.
Charlotte Mabel (Cotton) Smith, box 580, Globe, Ariz. Housewife.
Ernest Brown Coulson, Ashton, Idaho. Civil engineer.
George Henry Dial, Irving, Kan. At home.
Charles Francis Doane, M. S., Albert Lea, Minn. Assistant dairyman, dairy division, United States Department of Agriculture.
John Berthold Dorman, Pd. B., Boulevard and Jewett avenue, West New Brighton, N. Y. Teacher New York city schools.
Bradford Dougherty, 632-634 Minnesota avenue, Kansas City, Kan. Merchant.
Charles Silar Evans, M. D., Partridge, Kan. Physician.
Robert Kilby Farrar, Osborne, Kan. Superintendent of city schools.
George William Finley, Tonkawa, Okla. Professor of mathematics, Oklahoma University preparatory school.
Joanna Freeman. Died in 1897.
John Jacob Fryhofer, 1810 Byers avenue, Joplin, Mo. Bookkeeper and cashier for United Iron Works Company.
Elmer George Gibson, 2234 Kansas avenue, Topeka, Kan. Civil engineer, A. T. & S. F. railway.
George Clifton Hall, Manhattan, Kan. Publisher.
Alonzo Charles Havens, R. F. D. No. 4, Manhattan, Kan. Farmer.
Gertrude Julia (Havens) Norton. Died in 1905.
Lawrence Wilber Hayes, 228 Tyler street, Topeka, Kan. Foreman local freight department, C. R. I. & P. railway.
John Warren Holland, box 319, 228 Calle Alix, Manila, P. I. Broker.
Henry George Johnson, D. D. S., Lindsborg, Kan. Dentist.
Susan Effie (Johnson) Cooper, Blakeman, Kan. Housewife.
Marian Elizabeth (Jones) Pincomb, M. S., Lenexa, Kan. Housewife.
Thomas Lormer Jones, 731 Barnett street, Kansas City, Kan. Piano-tuner, J. W. Jenkins' Sons Music Company.
Edward Clarence Joss, M. D. C., 402 custom-house, Portland, Ore. Inspector in charge Portland, Ore., station, bureau of animal industry, United States Department of Agriculture.
Royal S. Kellogg, M. S., Washington, D. C. Forest inspector, forest service, United States Department of Agriculture.

Mark Kirkpatrick, 325 B street, S. W., Ardmore, Okla. Real estate.
Edith Lynette (Lantz) Simmons, 308 S. Fifth street, Victor, Colo. Housewife.
Sue (Long) Strauss, 431 East Tenth street, Oklahoma City, Okla. Housewife.
Charles W. Lyman, Topeka, Kan. Traveling salesman, Seymour Packing Company.
Charles Dwin McCauley, Wilburn, Kan. Farmer.
Charles Sumner Marty, Lake City, Barber county, Kansas. Farmer and stockman.
Elda Lenore (Keen) Moore, Manhattan, Kan. Housewife.
Arthur Houston Morgan, R. F. D. No. 3, Long Island, Kan. Farmer and stock-raiser.
Clara Verena (Newell) Brandt, Glenville, Neb. Housewife.
Ellen Elizabeth (Norton) Adams, R. F. D. No. 1, Arapahoe, Colo. Housewife.
John Bitting Smith Norton, M. S., College Park, Md. Professor of botany and vegetable pathology, Maryland Agricultural College, and state pathologist.
Hattie A. (Paddleford) McFadden, R. F. D. No. 3, Waverly, Kan. Housewife.
Mary Kerilla (Painter) Rogers, Bellaire, Okla. Housewife.
Elva Luthera (Palmer) Thackrey, 7400 Flora avenue, Maplewood, Mo. Housewife.
Inez Luella (Palmer) Barrows, Emmons, Kan. Housewife.
Fannie (Parkinson) Moyer, R. F. D. No. 3, Melvern, Kan. Housewife.
Archie Carpenter Peck, Francis, Okla. Manager of cotton-gin.
Arthur Louis Peter, M. D., 1216 Ventura street, Los Angeles, Cal. Physician.
Charles Edwin Pincomb, Lenexa, Kan. Stockman.
Mary Josephine (Pincomb) Moats, box 54, Tampico, Mexico. Housewife.
John Poole, R. F. D. No. 2, Manhattan, Kan. Farmer.
Edgar Arthur Powell. Died in 1904.
Lisle Willits Pursel, Cherokee, Kan. Car clerk, Frisco railroad.
Howard Newton Rhodes, 1524 Harrison street, Topeka, Kan. Interline clerk, freight auditor's office, A. T. & S. F. railway.
Ambrose Elliott Ridenour, Manhattan, Kan. Foreman of foundry, Kansas State Agricultural College.
Mary Etta (Ridenour) Plowman, lock box 124, Heyburn, Idaho. Housewife.
Isaac Archie Robertson, Alma, Kan. Manager Knostman's clothing and shoe store.
Grace Anna Secrest. Died in 1902.
Carl Snyder, Lebo, Kan. Telephone exchange.
Max Gilbert Spalding, 214 East Lewis street, Wichita, Kan. Railway postal clerk.
Orville Ashford Stingley, D. V. S., 1912 East Thirty-sixth street, Kansas City, Mo. Veterinary inspector, bureau of animal industry, United States Department of Agriculture.
Sadie (Stingley) Haggman, 3040 Hoover street, Los Angeles, Cal. Housewife.
Gertrude Ella Stump, Manhattan, Kan. Assistant in domestic art department, Kansas State Agricultural College.
Miriam Esther (Swingle) Joss, 402 custom house, Portland, Ore. Housewife.
William Elwood Thackrey, Fort Totten, N. Dak. Assistant superintendent, Fort Totten Indian school.
James Dunbar Trumbull, Sixteenth and Berendo streets, Los Angeles, Cal. Collector, Pico Heights Lumber Company.
Frank Edwin Uhl, 607 Quindaro boulevard, Kansas City, Kan. Bookkeeper Meyer Sanitary Milk Company.
Edwin H. Webster, M. S., Washington, D. C. Chief dairy division, bureau of animal industry, United States Department of Agriculture.

1897.

Cora Atwell, 1125 W. Third street, Topeka, Kan. At home.
Roger Williams Bishoff, Chilocco, Okla. Disciplinarian, Chilocco Indian school.
Mary Frances (Carnell) Roe, Dorrance, Kan. Housewife.
William Burns Chase, Dodge City, Kan. Wire chief, Dodge City Telephone Company.
Frank E. Cheadle, Cherokee, Okla. Farmer.
Robert Waitman Clothier, M. S., 923 East Sixth street, Tucson, Ariz. Professor of agriculture and superintendent of farmers' institutes in University of Arizona.
Maggie A. (Correll) Uhl, 607 Quindaro boulevard, Kansas City, Kan. Housewife.
Mabel (Crump) McCauley, 719 E. Forty-sixth street, Chicago, Ill. Housewife.
Fred Volley Dial, Irving, Kan. Farmer.
Viola Grace Dille, 3519 Euclid avenue, Kansas City, Mo. Clerk Meriden Creamery Company.
Samuel Dolby. Died in 1903.
George Doll, Pierceville, Kan. Farmer.
Anna Phillipina (Engel) Blackman, Manhattan, Kan. Housewife.
Emma (Finley) Schroder, 625 North Garey avenue, Pomona, Cal. Housewife.
Martha (Fox) Smith, 923 Madison street, Topeka, Kan. Housewife.
Philip Fox, M. S., Yerkes Observatory, Williams Bay, Wis. Instructor in astrophysics, University of Chicago.
Ned Merrill Green, Fort Douglass, Utah. First lieutenant, Fifteenth infantry, United States army.
Mary Eliza Haulenbeck. Died in 1901.
Lewellyn Gaines Hepworth, 1735 Clay street, Topeka, Kan. Real estate.
Ina Emma Holroyd, Manhattan, Kan. Assistant in preparatory department, Kansas State Agricultural College.
Myrtle Hattie (Hood) Johnson, Success, Kan. Housewife.
Charles Henry Hoop, Manhattan, Kan. Proprietor of restaurant.
Winifred Anna (Houghton) Buck, Oskaloosa, Kan. Housewife.
Bret Redmon Hull, 214 Poyntz avenue, Manhattan, Kan. Hardware merchant.
Clay Berkey Ingman, Barnes, Kan. Farmer.
Gertrude May (Lyman) Hall, Hyattsville, Md. Housewife.

Frederick Hugo Meyer, Fifth and Barnett avenue, Kansas City, Kan. Manager of creamery.
Valentine Maelzer, Goldburg, Idaho. Farmer and surveyor.
Sherman Bodwell Newell, R. F. D. No. 3, Manhattan, Kan. Ranchman.
Oliver Ezra Noble, Hobart, Okla. Civil engineer.
Jesse Baker Norton, M. S., College of Agriculture, Ithaca, N. Y. Assistant biologist, Cornell Experiment Station.
Mary Augusta (Norton) Polson. Died in 1908.
Bertha Olivia Olson, 2202 Francis street, St. Joseph, Mo. Housework.
Hilda Sophia (Olson) Axelton, Garrison, Kan. Housewife.
Russell John Peck, Gotebo, Okla. Farmer.
William Oscar Peterson, Gove, Kan. Principal of schools.
Eva Louise Philbrook, Wa Keeney, Kan. Teacher in primary department, city schools.
Rufus M. Philbrook, Palace hotel, Walla Walla, Wash. Traveling salesman, Sterling Refining Company.
William Joseph Rhoades, Olathe, Kan. Cashier in bank.
Carl E. Rice, police department, Manila, P. I. Patrolman.
Thomas Meade Robertson, D. D. S., Coffeyville, Kan. Dentist.
Homer Joseph Robison, Somers' Center, N. Y. Chef New York Catholic Protectory.
Edward Shellenbaum, Randolph, Kan. Postmaster.
Alice Myrtle Shofe, Thyne Institute, Chase City, Va. Principal of training school.
Charles Wesley Shull, Wallace, Kan. Farmer and dairyman.
Alfred Caleb Smith, 207 Harvard avenue, N., Seattle, Wash. Real-estate broker.
Phœbe Jane Smith, 514 W. Eighth street, Pueblo, Colo. Supervisor of domestic art and basketry in city schools.
Wilhelmina Henrietta Spohr, 10 Willow avenue, Calumet, Mich. Director of domestic science in city schools.
Charles Harrison Stokely, 4908 Wyandotte street, Kansas City, Mo. Solicitor and collector for Missouri & Kansas Telephone Company.
John E. Trembly, R. F. D. No. 5, Council Grove, Kan. Farmer and stock-raiser.
Harriet Agnes (Vandivert) Remick, Manhattan, Kan. Housewife.
Olive (Voiles) Jewell, Council Bluffs, Iowa. Housewife.
John Minton Westgate, M. S., Lanham, Md. Assistant agrostologist, United States Department of Agriculture.
Mark Wheeler, Fort Logan H. Roots, Little Rock, Ark. Captain, Sixteenth infantry, United States army.
Clare Annie (Wilson) Dutton, R. F. D. No. 2, Alta Vista, Kan. Housewife.

1898.

Emory Sherwood Adams, Manila, P. I. Second lieutenant, Fourteenth United States infantry.
Joshua William Adams, R. F. D. No. 1, Arapahoe, Colo. Ranchman.
Samuel John Adams, R. F. D. No. 1, Arapahoe, Colo. Farmer and real-estate agent.
Thomas Walter Allison, Florence, Kan. Fruit-grower and farmer.
William Anderson, M. S., 136 Hubbell avenue, Houghton, Mich. Instructor in physics and electrical engineering, Michigan College of Mines.
Jessie Geneva (Bayless) Staver, R. F. D. No. 1, Lenexa, Kan. Housewife.
Hope Brady, 203 N. Juliette avenue, Manhattan, Kan. Teacher.
Robert Henry Brown, Manhattan, Kan. Assistant professor of music, Kansas State Agricultural College.
Earl Carver Butterfield, Arlington farm, Rosslyn, Va. Assistant horticulturist, United States Department of Agriculture.
John Alfred Conover, 1331 Third street N. W., Washington, D. C. Scientific assistant in dairy division, bureau of animal industry, United States Department of Agriculture.
Minnie Laura Copeland, 109 South Broadway, Herington, Kan. Office nurse and surgical assistant.
Lucy Maria (Cottrell) Pottorf, R. F. D. No. 1, Riley, Kan. Housewife.
Anna Magdalena (Dahl) Davis, R. F. D. No. 1, Montrose, Kan. Housewife.
Inga Josephine Dahl, R. F. D. No. 1, Montrose, Kan. Teacher.
Cassie Belle Dille, 3519 Euclid avenue, Kansas City, Mo. Stenographer in office of Meriden Creamery Company.
Emma Phillipine Doll, Larned, Kan. Teacher.
Cora Elizabeth (Ewalt) Brown, Manhattan, Kan. Housewife.
Guy Francis Farley, Melvern, Kan. Farmer.
Mary (Finley) Ridenour, Manhattan, Kan. Housewife.
Arthur Lorenzo Frowe. Died in 1904.
William Logan Hall, M. S., Hyattsville, Md. Assistant forester, forest service, United States Department of Agriculture.
Anna Viola (Hanson) Higinbotham, Manhattan, Kan. Housewife.
Walter Eugene Hardy, 24 Isabelle street, Allegheny, Pa.
James Madison Harvey, R. F. D. No. 1, Ogden, Kan. Farmer.
Emmett Vivian Hoffman, Enterprise, Kan. Secretary and manager C. Hoffman & Son Milling Company.
Guy Dudley Hulett, D. O. Died in 1904.
Bertha Emma Ingman, Barnes, Kan. At home.
Ary Cordelia (Johnson) Butterfield, 3821 Morrill avenue, Kansas City, Mo. Housewife.
Charles Percy King, Eubanks, Okla. Secretary, The King Lumber Company.
Bessie May (Lock) Noble, Hobart, Okla. Housewife.
Olive Long. Died in 1902.

William Andrew McCullough, M. D., Delavan, Kan. Physician and surgeon.
Inez Isadore (Manchester) Allison, Florence, Kan. Housewife.
Florence Adelia Martin. Died in 1901.
Henry Alba Martin, Admire, Kan. Farmer.
Alice Maude Melton, Manhattan, Kan. Clerk in chemical department, Kansas State Agricultural College.
George Gerkein Menke, Garden City, Kan. Stock-breeder.
Mary Frances Minis, 501 Moro street, Manhattan, Kan. Stenographer the E. B. Purcell Trading Company.
May (Moore) Dakin, 1147 N. Emporia avenue, Wichita, Kan. Housewife.
Harriet Grace (Nichols) Donohoo, Tucumcari, N. M. Housewife and deputy probate clerk.
Schuyler Nichols, M. D., 2 N. Broadway, Herington, Kan. Physician and surgeon.
Lucy Junie Parks, Hominy, Okla. Teacher in Pottawatomie county, Kansas.
Ernest Byron Patten, Carthage, S. Dak. Assistant cashier, State Bank of Carthage.
C. Jeanette (Perry) Thomas, 1253 S. Thirteenth street, Harrisburg, Pa. Housewife.
Emilie Matilda (Pfuetze) Samuel, Stockdale, Kan. Housewife.
John Martin Pierce, Geyserville, Cal. Fruit-grower.
Raymond Haines Pond, M. S., Ph. D., 87 Lake street, Chicago, Ill. Professor of botany and pharmacognosy, Northwestern University.
William Poole, R. F. D. No. 2, Manhattan, Kan. Farmer.
Willis Thomas Pope, Honolulu, H. I. Acting dean, College of Agriculture and Mechanic Arts.
Nora May (Reed) Pierce, Geyserville, Cal. Housewife.
Gertrude Elizabeth Rhodes, Manhattan, Kan. Clerk.
Henry William Rogler, Bazaar, Kan. Farmer.
Ferdinand John Rumold, Hope, Kan. Farmer and stockman.
Martin Wilbur Sanderson, box 328, Marysville, Kan. County surveyor and city engineer of Marysville.
Olive Maria (Shelden) Parker, 319 Prospect avenue, El Paso, Tex. Housewife.
Edwin Lee Smith, Manhattan, Kan. Rural letter-carrier.
Oliver Russell Smith, C. E., 447 B street, San Bernardino, Cal. Civil engineer.
Bertha (Spohr) Smith, Fort Scott, Kan. Housewife.
Andrew B. Symns, R. F. D. No. 5, Troy, Kan. Farmer and stock-raiser.
Cora Thackrey, Valentine, Neb. Teacher.
Harriet Emerson (Thackrey) Reece, Simeon, Neb. Housewife.
Henry Marsden Thomas, 1253 South Thirteenth street, Harrisburg, Pa. General collection agent for J. I. Case Threshing-machine Company.
Elsie Lucile (Waters) Conner, Alden, Minn. Housewife.
Fred Dorsey Waters, Neame, La. Foreman grading department of C. C. C. C. Lumber Company.
Abner Davis Whipple, 614 West Sixty-first Place, Chicago, Ill. Clerk, Western Electric Company.
Adelaide Frances (Wilder) Sawdon, M. S., 961 East State street, Ithaca, N. Y. Housewife.
Josephine Hannah (Wilder) McCullough, M. S., Delavan, Kan. Housewife.
Frank Yeoman, LL. B., 57 Water-works building, Kansas City, Mo. Lawyer.
Frederick Zimmerman, Bendena, Kan. Cashier Bendena State Bank.

1899.

Bonnie Frances (Adams) Wilkin, Hoxie, Kan. Housewife.
Morrison Carpenter Adams, R. F. D. No. 2, Marvin, Kan. Stock farmer.
Melvia Fairetta Avery, M. D., Clay Center, Kan. Physician.
Albert Edwin Blair, 715 Huntoon street, Topeka, Kan. Architect.
James Courtney Bolton, Zeandale, Kan. Farmer.
Joseph Abbott Butterfield, 3S21 Morrill avenue, Kansas City, Mo. Railway postal clerk.
Willitt Ramson Correll, 1030 Laramie street, Manhattan, Kan. Carpenter.
Ernest Lerned Cottrell, Wabaunsee, Kan. Farmer.
Alfred Burton Dille, jr., Alamagordo, N. M. Ranchman and farmer.
Francis Joseph Habiger, Bushton, Kan. Farmer.
John George Haney, Oswego, Kan. Manager of the Deming ranch.
John Andrew Harvey, Alamagordo, N. M. Ranchman.
Grace Edna (Hill) Champlin, Phillipsburg, Kan. Housewife.
Hiram Adsit Holzer, 206 West Park avenue, Pittsburg, Kan. Superintendent United Iron-works Company, Pittsburg plant.
Charles Clifford Jackson, R. F. D. No. 1, Westmoreland, Kan. Farmer.
Fred Emanuel Johnson, D. V. S., box 501, Lincoln, Neb. Inspector, quarantine service, bureau of animal industry, United States Department of Agriculture.
Harry Wallace Johnston, 113 Fourth street, San Antonio, Tex. Inspector, "The Commercial Underwriters."
Lot Parker Keeler, 819 East Seventh street, Portland, Ore. Carpenter.
John Martin Kessler, Twenty-fifth and Kansas avenue, Topeka, Kan. Florist.
Albert Thomas Kinsley, M. S., D. V. S., 2108 East Thirty-sixth street, Kansas City, Mo. Director microscopic laboratory, Kansas City Veterinary College; veterinary practitioner.
Frank Elmer LaShelle, Manhattan, Kan. Job printer in printing department, Kansas State Agricultural College.
Christian Dagobert Lechner, Russell, Kan. Contractor and builder.
Ross Long. Died in 1908.

Louisa Mary (Maelzer) Haise, Russell, Kan. Housewife.
Kate Anna Manly, Manhattan, Kan. Teacher in city schools.
Claud Masters, Sulphur, Okla. Abstracter.
Robert Bertice Mitchell. Died in 1904.
Jennie June (Needham) Carter, R. F. D. No. 1, Rantoul, Kan. Housewife.
Roscoe Townley Nichols, M. D., Liberal, Kan. Physician and surgeon.
Fanny Gertrude Noyes, Lakeside Hospital, Cleveland, Ohio. Pupil nurse, Lakeside Hospital training-school.
Harry Delphos Orr, M. D., 103-109 Randolph street, Chicago, Ill. Physician and surgeon; lieutenant and assistant surgeon, First cavalry, Illinois National Guard.
George Washington Owens, Petersburg, Va. Professor of agriculture, State Normal and Industrial Institute.
Carrie Vashti (Painter) Desmarias, Lakeland, Kan. Housewife.
Ella Emerson Peck, 313 West Jones street, Sherman, Tex. Student of music, North Texas Female College.
Anna C. (Pfuetze) Julian, Olathe, Kan. Housewife.
Andrew Pottorf, R. F. D. No. 1, Riley, Kan. Farmer.
Mary Bly (Pritner) Lockwood, Allegheny Place, Meadville, Pa. Housewife.
Otto Independence Purdy, 2428 Lake street, Omaha, Neb. Field-man Daily Drovers-Journal Stockman.
Delmer William Randall, Filer, Idaho. Farmer and civil engineer.
William Harry Roberts, Vernon, Kan. Farmer.
Frank Sessions Shelton, Ketchiken, Alaska. Bookkeeper.
Louisa Mary Spohr, Parkview Hospital, Manhattan, Kan. Trained nurse.
Annie Louisa (Streeter) Haney. Died in 1906.
Nellie (Towers) Brooks, 301 West Thirteenth street, Kansas City, Mo. Housewife.
Otho Sprague True, R. F. D. No. 2, Paxico, Kan. Farmer.
James Otis Tulloss, Sedan, Kan. Merchant, and Regent Kansas State Agricultural College.
William Guy Tulloss, Rantoul, Kan. Cashier State Bank.
George Franklin Wagner, Enterprise, Kan. Farmer and stock-raiser.
Mary Lana (Waugh) Smith, 207 Harvard avenue, N., Seattle, Wash. Housewife.
Charles Bernard White, 708 Lawrence street, Topeka, Kan. With Seymour Packing Company.
Nannie Elizabeth Williams, R. F. D. No. 2, Gardner, Kan. Stenographer.
Alexander George Wilson. Died in 1902.
Frederick Otto Woestemeyer, B. D., Rossville, Kan. Minister.

1900.

Elizabeth Jane Agnew, 330 St. Francis street, Wichita, Kan. Instructor of domestic science and art in high school.
Elizabeth Edna (Asbury) Derr, 221 East High street, Mt. Pleasant, Mich. Housewife.
Effie Elizabeth (Bailey) Foltz, Zeandale, Kan. Housewife.
Alvah I. Bain, Marysville, Kan.
Harry M. Bainer, M. S. A., 900 Smith street, Fort Collins, Colo. Professor of farm mechanics, Colorado Agricultural College.
Charlotte Almira (Berkey) Smith, El Dorado, Kan. Housewife.
John Harold Blachly, D. D. S., Manhattan, Kan. Dentist.
Minerva (Blachly) Dean, Manhattan, Kan. Housewife.
Zina Leigh Bliss, A. B., Grosse Pointe, Mich. Forester and nurseryman.
Fred Winchester Bobbitt, 1135 K street, Perry, Okla. Engineer for the Trinity & Brazos Valley Railway Company.
Lillie Grace Bolton, R. F. D. No. 1, Wamego, Kan. Teacher.
Prudence Dell (Broquet) Bailey, Huerfano, Colo. Housewife.
Nellie (Burtner) Sargent. Died in 1901.
Clarence Asa Chandler, Swope Park, R. F. D. No. 3, Kansas City, Mo. Superintendent Swope Park.
Frederick Waldemar Christensen, box 325, State College, Pa. Assistant in animal nutrition in the institute of animal nutrition, Pennsylvania State College.
Ernest Mansel Cook, Oakley, Kan. Farmer and stock-raiser.
Charles McClain Correll, 691 East Fifty-seventh street, Chicago, Ill. Graduate student University of Chicago.
Jennie Maude Currie, 904 Monroe street, Topeka, Kan. Stenographer, A. T. & S. F. general offices.
Harry Leroy Dern, Cimarron, Kan. Farmer.
Homer Derr, M. S., 221 East High street, Mt. Pleasant, Mich. Instructor in physics and mathematics, Central State Normal School.
Mary Alberta (Dille) Hulett, Alamogordo, N. M. Housewife.
Robert Edward Eastman, Manhattan, Kan. Assistant horticulturist, Kansas State Agricultural College.
Jennie (Edelblute) Smethurst, Manhattan, Kan. Housewife.
Eugene Emrick, 1724 Main street, Joplin, Mo. Bookkeeper for L. B. Price Mercantile Company.
Josephine Finley, Manhattan, Kan. Stenographer in Horticultural Department, Kansas State Agricultural College.
Harry Verne Forest, Thayer, Kan. Contract agent, Edison Street Railway and Power Company, Wichita, Kan.
George Ogden Greene, M. S., Plainville, Kan. Merchant.

Herman C. Haffner, Hesperus, Colo. Assistant superintendent, Fort Lewis Indian school.
Gustaf William Hanson, lock box P, Marquette, Kan. Proprietor and superintendent of Hanson Novelty Manufacturing Company.
James William Harner, Manhattan, Kan. Junior veterinary student, Kansas State Agricultural College.
Daisy Gladys (Hoffman) Johntz, 307 Vine street, Abilene, Kan. Housewife.
Walter Fisk Lawry, 4145 Indiana avenue, Chicago, Ill. Draftsman with the Link Belt Company.
Amanda Culp (McCarty) Coats, Liberal, Mo. Housewife.
N. Ollie (McCurry) Walker, Plymouth, Kan. Housewife.
George G. McDowell, 2707 Second avenue north, Billings, Mont. Clerk.
Roland McKee, Chico, Cal. Scientific assistant in horticulture, United States Department of Agriculture.
Nettie (McLaren) Scott, Santa Fe, Kan. Housewife.
Charles Dudley Montgomery. Died in 1902.
Fred Byers Morlan, R. F. D. No. 1, Courtland, Kan. Farmer.
Andrew Edward Oman, M. F., forest service, Washington, D. C. Forest assistant, forest service, United States Department of Agriculture.
Kate (Paddock) Hess, 242 St. Louis street, Dallas, Tex. Housewife.
Joseph Lloyd Pancake, Mt. Airy, Ga. Farmer and stock-raiser.
Albert William Parrack. Died in 1901.
Edith (Perkins) Myers, 1708 Oak street, South Pasadena, Cal. Housewife.
Elenore Perkins, box 238, South Pasadena, Cal. At home.
Paul du Chaillu Piersol, 119 South First street, Guthrie, Okla. Manufacturer.
Luther Eugene Potter, Myton, Utah. Farmer.
Clara Spilman, Manhattan, Kan. Assistant in office of register of deeds.
Mabel Stewart, Neosho, Mo. Instructor in mathematics, high school.
Stella Stewart, Wingohocking Hall, Mt. Airy, Philadelphia, Pa. Teacher, intermediate department, Pennsylvania Institution for the Deaf.
Fayette Charles Sweet, Sophia, Okla. Stockman.
Cora Edith Swingle, Rochester, Mich. At home.
Deane Bret Swingle, M. S., 713 South Grand avenue, Bozeman, Mont. Assistant professor of botany, Montana Agricultural College.
Barton Thompson.
Laura Helen (Trumbull) Correll, 691 East Fifty-seventh street, Chicago, Ill. Housewife.
Jessie May Wagner, Enterprise, Kan. At home.
Luther Watts Waldraven, R. F. D. No. 1, Winkler, Kan. Farmer and stock-raiser.
Kate Elizabeth Zimmerman, Fruita, Colo. Teacher in city schools.

1901.

Del Mar Akin, M. D., 830 Moro street, Manhattan, Kan. Physician.
Cyrus Norton Allison, D. D. S., box 954, Falls City, Neb. Dentist.
Loua Adelle (Blachly) Freeman, Manhattan, Kan. Housewife.
Harry S. Bourne, Delphos, Kan. Carpenter and machinist.
Charles J. Burson, Hewins, Kan. Bank cashier.
Howard Frank Butterfield, 703 West Third street, Pittsburg, Kan. Instructor in manual training in city high school.
Edwin Charles Cook. Died in 1903.
Ina Foote Cowles, Manhattan, Kan. Assistant in domestic art department, Kansas State Agricultural College.
Trena (Dahl) Turner, Norton, Kan. Housewife.
Fannie Rachel Ellen Dale, Manhattan, Kan. Stenographer in mechanical department, Kansas State Agricultural College.
Herman August Dieball, Alma, Kan. Farmer.
Edgar Willis Doane, A. B., Palo Alto, Cal. Civil engineer, with Western Pacific railway.
Otto H. Elling, R. F. D. No. 4, Lawton, Okla. Farmer.
Valentine Meacham Emmert, R. F. D. No. 1, Blue Rapids, Kan. Farmer and stock-raiser.
Rainey Faris, box 371, Upper Alton, Ill. Assistant mechanical engineer for Western Cartridge Company, of East Alton.
Harry Haines Fay, R. F. D. No. 2, Wilsey, Kan. Farmer.
Fred Fockle, Waverly, Kan. Banker.
Louise Gerteis, 232 North Topeka street, Wichita, Kan. Teacher.
Maud Hart, Manhattan, Kan. Graduate student, Kansas State Agricultural College.
Fred Willis Haselwood, Altamont, Cal. Civil engineer, Western Pacific Railway Company.
Minnie M. Howell, 1040 Freeman avenue, Kansas City, Kan. Teacher of domestic science in Sumner high school.
Edith (Huntress) Rhoades, Olathe, Kan. Housewife.
Louis Berten Jolley, M. D., Gurnee, Ill. Physician and surgeon.
Helen (Knostman) Pratt, Manhattan, Kan. Housewife.
Daniel Ladd, 5484 Monroe avenue, Chicago, Ill. Student University of Chicago.
Erma Elizabeth Locke, Mountain Grove, Mo. Teacher.
Harvey McCaslin, A. B., LL. B., Atwood, Kan. Lawyer.
Madge Ruth (McKeen) Axelton, Randolph, Kan. Housewife.
John A. McKenzie, R. F. D. No. 1, Solomon, Kan. Farmer.
George Martinson, Manhattan, Nev. Attorney.
Walter E. Mathewson, M. S., 6005 Ellis avenue, Chicago, Ill. Assistant chemist, United States food and drug laboratory.

Emma Maude (Miller) Cook, Oakley, Kan. Principal of schools.
Margaret Jane (Minis) Snodgrass, Kodiak, Alaska. Housewife.
Clarence William Morgan, Phillipsburg, Kan. Farmer.
Eugene Lawrence Morgan, M. D., Phillipsburg, Kan. Physician and surgeon.
Ruth Atwill Mudge, 909 Fourth avenue, Louisville, Ky. Teacher of botany, girls' high school.
Jessie May Mustard, Solomon, Kan. Primary teacher.
Martha (Nitcher) Sowers, R. F. D. No. 1, Ames, Iowa. Housewife.
John H. Oesterhaus, Fort Riley, Kan. Veterinarian, Seventh United States cavalry.
Carrie Belle Oneel, 191 Lincoln avenue, San Jose, Cal. Bookkeeper and stenographer.
Helena Maude Pincomb, 1003 N. Oregon street, Urbana, Ill. Teacher of domestic science, University of Illinois.
Bryant Poole, R. F. D. No. 2, Manhattan, Kan. Farmer.
Leroy Rigg, Kirwin, Kan. Farmer and stock-raiser.
William Stephen Sargent. Died in 1908.
Maude (Sauble) Rogler, Bazaar, Kan. Housewife.
Charles A. Scott, Station A, Ames, Iowa. Professor of forestry, Iowa State College.
Anna Louisa (Smith) Kinsley, 2108 East Thirty-sixth street, Kansas City, Mo. Housewife.
Adelaide Strite, Ellsworth, Kan. Teacher in city schools.
Anna Odette (Summers) Galligan, 1420 S. Mt. Vernon street, Spokane, Wash. Housewife.
Lucy (Sweet) Betts, 285 Devisadero street, San Francisco, Cal. Housewife.
Perrin K. Symns, R. F. D. No. 6, Troy, Kan. Farmer and stock-raiser.
Estella Mae (Tharp) Edwards, 579 La Salle avenue, Chicago, Ill. Medical student and housewife.
Helen Castle True, 1400 Fillmore street, Topeka, Kan. Teacher.
Harry Castle Turner, Fort Bayard, N. M. Forest-planting assistant, United States Department of Agriculture.
Florence Helen (Vail) Butterfield, 703 West Third street, Pittsburg, Kan. Housewife.
Mary Caroline (Wagner) Gresham, box 314, Grand Junction, Colo. Housewife.
Eleanor Mary White, American Falls, Idaho. Teacher.
Katharena (Winter) Hawks, 114 South Kansas avenue, Chanute, Kan. Housewife.
Lucie Joan (Wyatt) Wilson, Onaga, Kan. Housewife.
Henry Theador York. Died in 1902.

1902.

Mamie (Alexander) Boyd, Phillipsburg, Kan. Housewife.
Edgar McCall Amos, 1015 Leavenworth street, Manhattan, Kan. Printer and publisher.
Henry Albert Avery, Wakefield, Kan. Hardware, furniture and implement dealer.
Etta Marie Barnard, Mankato, Kan. Assistant and manual-training teacher, Mankato high school.
Mary Olive Barr, Manhattan, Kan. At home.
George Ford Bean, Manhattan, Kan. Carpenter.
Charles Dallas Blachly, M. D., Hewins, Kan. Physician.
Bessie Sarah Bourne, Delphos, Kan. Teacher in city schools.
Martha Amelia Briggs, R. F. D. No. 6, Manhattan, Kan. At home.
Emma M. (Cain) Weiss, Virginia, Neb. Housewife.
Floyd Adelbert Champlin, Phillipsburg, Kan. Stock farmer.
Elijah Ellis Chase, R. F. D. No. 1, Merriam, Kan. Farmer.
Charles Howard Clark, Kinsley, Kan. Farmer and dairyman.
Maude Mildred Coe, Yates Center, Kan. At home.
Murray Stanley Cole, 11 Bethany Circle, Santa Cruz, Cal. Machinist, with Coast Counties Light and Power Company.
Robert Curtise Cole, Platte, S. Dak. Stockman.
Lottie Irene Crawford, 315 Pium street, Fort Collins, Colo. Teacher of domestic science, Colorado Agricultural College.
Sarah Emily Davies, Bala, Kan. Teacher.
Della (Drollinger) Glunt, Garrison, Kan. Housewife.
Charles Eastman, D. V. S., Cambria, Cal. Veterinary inspector, bureau of animal industry, United States Department of Agriculture.
Leslie Arthur Fitz, Washington, D. C. In charge of grain standardization office, bureau of plant industry, United States Department of Agriculture.
Glick Fockele, Le Roy, Kan. Journalist, loan and insurance agent.
Clark A. Gingery, R. F. D. No. 2, Caldwell, Kan. Farmer.
William Lee Harvey, 1324 Tyler street, Topeka, Kan. Assistant supreme court reporter and attorney at law.
Benjamin F. Haynes, jr., R. F. D. No. 3, Boise, Idaho. Ranchman.
William Rutherford Hildreth, R. F. D. No. 2, Altamont, Kan. Farmer.
Christine Delphine (Hofer) Johnson, 69 Court street, Newark, N. J. Housewife.
Henrietta Mattie Hofer, Brielle, N. J. Musician.
Edouard Wilfred House, 241 South Tenth street, Kansas City, Kan. Pattern-maker and millwright, Proctor & Gamble Soap Company.
Letta Birdella (Keen) Edmondson, Wakefield, Kan. Housewife.
Edgar Willis Kimball, 728 Poyntz avenue, Manhattan, Kan. Publisher of *Republic*.
Arthur Henry Leidigh, R. F. D. No. 3, Hutchinson, Kan. Farmer and stock-raiser.
George M. Logan, M. D., 511 East Market street, Akron, Ohio. Physician and surgeon.

Otto Meade McAninch, Weskan, Kan. Farmer.
Amelia Augusta Maelzer, May, Idaho. Teacher.
Margaret Myrtle (Mather) Romine, R. F. D., Mooresville, Ind. Housewife, and lecturer on domestic science, farmers' institutes.
Roger Bonner Mullen, University Station, Seattle, Wash. Student of electrical engineering, University of Washington.
Grover Poole, R. F. D. No. 2, Manhattan, Kan. Farmer.
Abbie Elida (Putnam) Cutting, Lenora, Kan. Housewife.
Henry Paul Richards, lock box 116, Topeka, Kan. Real estate agent, with Standard Land Company, of Kansas City, Mo.
Eva Talitha Rigg, East Fifteenth street and Denver avenue, Kansas City, Mo. Teacher of domestic science in Kansas City National Training School for Deaconesses.
John Francis Ross, Amarillo, Tex. Superintendent United States Experimental Farm.
Pontus Henry Ross, Mountain Home, Idaho. Farmer.
Fred Lewis Schneider, D. V. S., room 308, Occidental Life building, Albuquerque, N. M. Veterinarian; inspector, bureau of animal industry, United States Department of Agriculture.
Edmund Ray Secrest, 89 North Market street, Wooster, Ohio. Assistant forester, Ohio Agricultural Experiment Station.
Glen Reid Shepherd, 623 Oakland avenue, Kansas City, Kan. Treasurer Orpheum theater.
Charles Franklin Smith, El Dorado, Kan. Principal of high school.
Walter Hayward Spencer, Yates Center, Kan. Farmer and stock-raiser.
John Thomas Stafford, Crawford, Colo. Ranchman.
Myrtle Lucy Toothaker, R. F. D. No. 3. Blaine, Kan. At home.
Fred Walters, Manhattan, Kan. Contractor and builder.
Lilly Maud Zimmerman, Moray, Kan. Teacher of science and mathematics in Proctor Academy, Provo, Utah.

1903.

Richard Franklin Bourne, D. V. S., 3308 Garfield avenue, Kansas City, Mo. Professor of physiology, Kansas City Veterinary College.
Howard McCune Chandler, Guanica Central, Guanica, Porto Rico. Mechanical engineer; construction engineer for Guanica Central.
DeVerne E. Corbin, care Watch Tower Bible and Tract Society, 610-614 Arch street, Allegheny, Pa. Colporteur.
James A. Correll, University of Texas, Austin, Tex. Tutor in electrical engineering, University of Texas.
Amos Luther Cottrell, care of Quaker Oats Company, Chicago, Ill. Feed expert and traveling representative Quaker Oats Company.
Claude Carroll Cunningham, Manhattan, Kan. Assistant in agronomy department and graduate student, Kansas State Agricultural College.
Orrin Pomeroy Drake, R. F. D. No. 2, Frankfort, Kan. Farmer.
Louis Sidney Edwards, Deming ranch, Oswego, Kan. Ranch foreman.
Robert Alexander Esdon, B. D., R. F. D., Superior. Neb. Minister.
Corinne (Failyer) Kyle, 220 Fourth street S. E., Washington, D. C. Housewife.
Maude Irene (Failyer) Kinzer, Manhattan, Kan. Housewife.
Estella May Fearon, 47 Weston Road, Wellesley, Mass. Instructor in gymnastics, golf and tennis, Wellesley College.
George T. Fielding, Schenectady, N. Y. Electrical engineer, General Electric Company.
James William Fields, D. D. S., 949 Minnesota avenue, Kansas City, Kan. Dentist.
Arthur B. Gahan, College Park, Md. Assistant entomologist, Maryland Experiment Station.
Fred Norton Gillis, Wishek, N. Dak. Cashier First State Bank, and secretary and treasurer Bankers' Loan Company.
Clara S. Goodrich, Danville, Va. Teacher of science and mathematics in Roanoke Ladies' College.
Edith Anna Goodwin, 1038 Vermont street, Lawrence, Kan. Student, Kansas University.
Ellsworth Paul Goodyear, R. F. D. No. 1, Oatville, Kan. Fruit-grower and dairyman.
Alanson L. Hallsted, Havana, Kan. Farmer.
Esther E. (Hanson) Ross, Mountain Home, Idaho. Housewife.
Edward Howard Hodgson, Little River, Kan. Farmer and stock-raiser.
Pearl Holderman, R. F. D. No. 4, Chetopa, Kan. At home.
Hartley Bowen Holroyd, Washington, D. C. Forest assistant in forest service, United States Department of Agriculture.
Sarah Hougham, 320 North Eleventh street, Manhattan, Kan. Editor alumni magazine, Kansas State Agricultural College.
Axel H. Johnson, Avenida Central 76, Rio de Janeiro, Brazil, S. A. Electrician.
Jesse McCullah Jones, R. F. D. No. 4, Montgomery, Ala. Planter and stock-raiser.
Hernon Curtis Kyle, 220 Fourth street S. E., Washington, D. C. Corn investigations, bureau of plant industry, United States Department of Agriculture.
Raymond George Lawry, 4145 Indiana avenue, Chicago, Ill. Structural engineer, with Roberts & Schaefer Company.
Rose Margaret McCoy, Manhattan, Kan. Teacher.
Edwin William McCrone, D. V. M., Haddam, Kan. Veterinarian.
Bessie A. (Mudge) Houser, Santiago de las Vegas, Cuba. Housewife.

Harold Theodore Nielsen, 4520 Ninth street, W., Washington, D. C. Scientific assistant, bureau of plant industry, United States Department of Agriculture.
Ivan L. Nixon, Geological Hall, Albany, N. Y. Assistant to state entomologist.
Russell Arthur Oakley, 322 Maryland avenue, N. E., Washington, D. C. Assistant agrostologist, United States Department of Agriculture.
Anna Louella (O'Daniel) Amos, 1015 Leavenworth street, Manhattan, Kan. Housewife.
Clara Pancake, Mount Airy, Ga.
Celoa Alice (Perry) Hill, Fayette, Mo. Housewife.
Alexis Joseph Reed, 1122 Wesley avenue, Oak Park, Ill. Telephone engineer, with Western Electric Company.
Earl Nathaniel Rodell, Manhattan, Kan. Assistant in printing, Kansas State Agricultural College.
Alice May (Ross) Cunningham, Centralia, Kan. Housewife.
Alfred Hayes Sanderson, R. F. D. No. 1, Marysville, Kan. Farmer.
John Marcus Scott, 406 East Orange street, Gainesville, Fla. Professor of animal industry, Florida Agricultural Experiment Station.
Henry August Sidorfsky, Avenida Central 76, Rio de Janeiro, South America. Electrical engineer, Rio de Janeiro Tramway, Light and Power Company, Ltd.
Emma Estella (Smith) Burt, R. F. D. No. 1, Alma, Kan. Housewife.
Harold Addison Spilman, Manila, P. I. Teacher, United States civil service.
Lois Stump, Manhattan, Kan. At home.
Harry Raymond Thatcher. Died in 1906.
Helen B. Thompson, M. S., 318 Lincoln avenue, Lincoln, Ill. Director of department of domestic science, Lincoln College.
John Augustus Thompson, Iloilo, P. I. Veterinarian, Bureau of Agriculture of Philippine Islands.
Sarah Pauline (Thompson) Manny, Claraville, Okla. Housewife.
Dovie May (Ulrich) Boys, Goodland, Kan. Housewife.
Harry Nelson Vinall, Washington, D. C. Scientific assistant, bureau of plant industry, United States Department of Agriculture.
Alberta Suena (Voiles) Williams, Bradley, Cal. Housewife.
Leon Vincent White, 309 Pine street, Chillicothe, Ill. Topographical draftsman for Sanitary District of Chicago.

1904.

Amy Alena Allen, Manhattan, Kan. Proof-reader in printing department, Kansas State Agricultural College.
Marian (Allen) Buell, Roanoke, Tex. Housewife.
Grace Allingham, Lobdell, Kan. Teacher.
James George Arbuthnot, Roslyn, Wash. Physical director, Roslyn Y. M. C. A.
Clinton Jesse Axtell, 203 Seward Place, Schenectady, N. Y. In testing department of the General Electric Company.
Wallace W. Baird, Clay Center, Kan. Farmer.
Flora Evacelia (Ballou) Banning, R. F. D. No. 2, Lyndon, Kan. Housewife.
William Burgess Banning, R. F. D. No. 2, Lyndon, Kan. Farmer and stock-raiser.
Clara Florence Barnhisel, 334 East Eighth street, Newton, Kan. At home.
Frank Lorin Bates, 217 Glen avenue, Ann Arbor, Mich. Law student, University of Michigan.
Louis Blaine Bender, Highland, Kan. Manager Home Telephone and Electric Company.
John Jeremiah Biddison, Gazette building, Little Rock, Ark. City editor, Arkansas *Gazette*.
P. McDonald Biddison, 603 South Sixth street, Independence, Kan. Assistant to chief engineer, Kansas Natural Gas Company.
Wallace Newton Birch, 135 Tyler street, Topeka, Kan. Dairyman.
Otis Neel Blair, 325 Twelfth street, Portland, Ore. Draftsman, with Portland Railway, Light and Power Company.
William Armfield Boys, Goodland, Kan. Farmer.
Viva (Brenner) Morrison, Manhattan, Kan. Housewife.
Thomas Warner Buell, Roanoke, Tex. Farmer.
Clark Stewart Cole, Manhattan, Kan. Teacher in city schools.
Victor L. Cory, 503 North Main street, McPherson, Kan. Scientific assistant, bureau of plant industry, United States Department of Agriculture.
Jennie Pearl Cottrell, Wabaunsee, Kan. At home.
Ella Criss, Anaheim, Cal. At home.
Wilma Greene (Cross) Rhodes, 1524 Harrison street, Topeka, Kan. Housewife.
Mary E. (Davis) Ahearn, Manhattan, Kan. Housewife.
William DeOzro Davis, 627 Monroe street, Topeka, Kan. Electrical inspector, mechanical department, A. T. & S. F. railway.
Charles Sumner Dearborn, 708 South Grand avenue, Bozeman, Mont. Associate professor of mechanical engineering, Montana Agricultural College.
Thomas E. Dial, Topeka, Kan. Traveling electrician, A. T. & S. F. railway.
Lawrence A. Doane, Oglesby, Ill. Dairy farmer.
May (Doane) Greenough, Rocky Ford, Colo. Housewife.
Roy Nathan Dorman, R. F. D. No. 6, North Topeka, Kan. Superintendent Spring Brook farm.
Carl O. Duehn, 39 West Twelfth street, New York city. In purchasing department, American Bank Note Company.
Glen Edgar Edgerton, Culebra, Canal Zone, Panama. Engineer's corps, Panama canal.

Carl G. Elling, Manhattan, Kan. Assistant in Department of Animal Husbandry, Kansas State Agricultural College.
Ralph B. Felton, Dwight, Kan. Farmer.
Ray Bonifield Felton, R. F. D. No. 6, McPherson, Kan. Farmer.
Elizabeth (Finlayson) Zuck, Cheyenne Wells, Colo. Principal of schools.
Jessie Lois Fitz, R. F. D. No. 5, Baldwin, Kan. Teacher.
Beulah Fleming, Manhattan, Kan. Teacher in city schools.
Hattie L. (Forsyth) Felton, Dwight, Kan. Housewife.
Louis Cloyd Foster, box 125, Wellington, Kan. Electrician, with A. T. & S. F. railway.
Edwin Chase Gardner, care Swift & Company, Stock Yards station, Chicago, Ill. Cattle-buying department, Swift & Company.
Walter Otis Gray, M. D., Burlington, Wyo. Physician.
Augusta (Griffing) Harlan, ———. Housewife.
John Bernice Griffing, University Place, Des Moines, Iowa. Student Drake University.
Charles Alfred Groves, Edwardsville, Kan. Farmer.
Mary Elizabeth Longfellow Hall, 1061 West Thirty-first street, Los Angeles, Cal. Teacher.
Harry Vaughn Harlan.
Mamie Magdalene Hassebroek, 420 West One Hundred and Twenty-first street, New York, N. Y. Student, Teachers' College, Columbia University.
Arthur Hurschel Helder, Carnegie Library building, Kansas City, Kan. Secretary Board of Park Commissioners, graduate student, Kansas State Agricultural College.
Mamie Eva (Helder) Halstead, Havana, Kan. Housewife.
William A. Hendershot, Geneseo, Kan. Teacher.
John Samuel Houser, Santiago de las Vegas, Cuba. Assistant entomologist in experiment station.
Evan James, R. F. D. No. 3, St. John, Kan. Teacher.
John Arthur Johnson, Colville, Wash. Homesteader, and director of athletics in Colville high school.
Helen Kernohan, Beverly, Kan. Clerk.
Ralph Teeter Kersey, Wamego, Kan. Principal Cedar high school, Cedar, Kan.
Charles Franklin Kinman, Santiago de las Vegas, Cuba. Assistant horticulturist, experiment station.
Alice M. Loomis, Oak Glen, Peru, Neb. Teacher of domestic science in Nebraska State Normal.
George W. Loomis, R. F. D. No. 4, Girard, Kan. Farmer and stock-raiser.
Sara Grace McCrone, R. F. D. No. 3, Haddam, Kan. At home.
Vera Alta McDonald, Manhattan, Kan. Record clerk, executive department, Kansas State Agricultural College.
Kirk P. Mason, M. D., Cawker City, Kan. Physician.
Howard David Matthews, 362 McClellan street, Schenectady, N. Y. Engineer switchboard department, General Electric Company.
Vernon Matthews, 631 Western avenue, West Lynn, Mass. Draftsman, with the General Electric Company.
Chester Arthur Maus, 623 Lawrence street, Topeka, Kan. Chief electrician for Santa Fe railway shops.
Julia Anna Monroe, Manhattan, Kan. Assistant in Botanical Department, Kansas State Agricultural College.
Helen Monsch, School of Domestic Science, 39 State street, Chicago, Ill. Teacher of domestic science.
Samuel Erwin Morlan, 2727 Boles avenue, Kansas City, Mo. Assistant foreman of shop, Western Electric Company.
Albert Marvin Nash, Golden, Colo. Student Colorado School of Mines.
Virginia Viola Norton, 718 Kearney street, Manhattan, Kan. Graduate student, Kansas State Agricultural College.
Mary Lorena (O'Daniel) Scott, 406 East Orange street, Gainesville, Fla. Housewife.
Tom Lawrence Pittman, Lewiston, Mont. Electrician.
Charles A. Pyle, D. V. M., Salina, Kan. Veterinarian.
Elvin Rickman, Tonopah, Nev. Assayer.
Jennie Florence Ridenour, 3223 Sansom street, Philadelphia, Pa. Student, Drexel Institute.
Florence Rebecca (Ritchie) Dearborn, 708 South Grand avenue, Bozeman, Mont. Housewife.
Jesse L. Rogers, 1120 Eighth street, Pueblo, Colo. Railway postal clerk.
Flora Rose, 811 East State street, Ithaca, N. Y. Lecturer in home economics at Cornell University.
Lawrence V. Sanford, R. F. D. No. 2, Oneida, Kan. Farmer and stock-raiser.
James G. Savage, 716 Fifth street, San Bernardino, Cal. Draftsman and instructor of apprentices, A. T. & S. F. railway.
Nicholas Schmitz, Washington, D. C. Expert in bureau of plant industry, United States Department of Agriculture.
Robert Douglas Scott, Lincoln, Neb. Teacher of science in high school.
Roy A. Seaton, Manhattan, Kan. Assistant in mechanical engineering, Kansas State Agricultural College.
John T. Skinner, 904 Ohio street, Lawrence, Kan. Superintendent of Lawrence Electric-light Company.
Marjorie Smith, 514 West Eighth street, Pueblo, Colo. Bookkeeper, Franklin Press Company.

Sallie Maud Smith, 312 Pottawatomie avenue, Manhattan, Kan. Primary teacher in Douglas school.
Arthur S. Stauffer, R. F. D. No. 28, Beloit, Wis. Architect.
K. Elizabeth (Sweet) Pittman, M. S., Lewistown, Mont. Housewife.
Wendell Phillips Terrell, S. B., Prairie View, Tex. Professor of mechanics, Prairie View State Normal and Industrial College.
Henry Thomas, erecting engineer, electrical department, Allis-Chalmers Company, New York district.
Carl Thompson, R. F. D. No. 1, Garrison, Kan. Farmer and stockman.
Norman Lee Towne, R. F. D. No. 1, Waverly, Kan. Farmer and stock-raiser.
William Turnbull, 716 Fifth street, San Bernardino, Cal. Special apprentice, A. T. & S. F. railway shops.
Gertrude M. Vance, 1200 Laramie street, Manhattan, Kan. At home.
Orin Russell Wakefield, 352 South Hoyne avenue, Chicago, Ill. Student College of Physicians and Surgeons, University of Illinois.
Frank Cooper Webb, R. F. D. No. 1, Viola, Kan. Farmer.
William Allen Webb, R. F. D. No. 1, Clearwater, Kan. Farmer.
James Halley Whipple, 473 Reno avenue, Topeka, Kan. Machinist, Topeka shops, A. T. & S. F. railway.
Orville Blaine Whipple, Grand Junction, Colo. Field horticulturist of Colorado Agricultural Experiment Station.
Emily Jennie (Wiest) Joss, Fairview, Kan. Housewife.
Robert S. Wilson, R. F. D. No. 3, Burden, Kan. Farmer and stock-raiser.
Retta Womer, Ph. C., Womer, Kan. At home.

1905.

Harvey Adams, Cebu, Cebu, P. I. Second lieutenant, Philippine constabulary.
Edward E. Adamson, 133 Front street, Schenectady, N. Y. Electrician, with General Electric Company.
Elva Veola Akin, Manhattan, Kan. Graduate student and teacher in preparatory department, Kansas State Agricultural College.
Pearl Akin, 830 Moro street, Manhattan, Kan. Graduate student, Kansas State Agricultural College.
Nellie Wilhelmina Baird, Marquette, Kan. Teacher.
Walter Raymond Ballard, College Park, Md. Assistant horticulturist, Maryland Agricultural Experiment Station.
Jessie Mary Ballou, Delphos, Kan. Teacher.
Frank Everett Balmer, Woodston, Kan. Farmer.
Asa William Barnard, 1430 Houston street, Manhattan, Kan. Mechanical engineer.
Atwood N. H. Beeman, 1217 Virginia street, Kansas City, Mo. Proof-reader, Burd and Fletcher Printing Company.
Herbert F. Bergman, Manhattan, Kan. Assistant in botanical department, Kansas State Agricultural College.
Charles Paul Blachly, 243 West Fourteenth street, New York city. Electrical engineer, physical laboratory Western Electric Company.
Helen Elizabeth (Bottomly) Lill, R. F. D. No. 2, Mount Hope, Kan. Housewife.
Walter J. Brant, 210 West First street, Wichita, Kan. Contractor and builder.
Harvey A. Burt, 114 East Seventh street, Leadville, Colo. Operating Leadville power plant.
Eva Maggy (Burtner) Potter, Manhattan, Kan. Housewife.
Ray Arthur Carle, 1502 Continental Insurance building, Baltimore, Md. Erecting engineer, Westinghouse Electric and Manufacturing Company.
August Belmont Carnahan, 16 Mount avenue, Swampscott, Lynn, Mass. Mechanical engineer, turbine-engine office of the General Electric Company.
Albert F. Cassell, D. V. M., Beverly, Kan. Veterinarian.
Joseph Griffith Chitty, Blaine, Kan. Farmer and stock-raiser.
L. Ethel Clemons, Manhattan, Kan. Graduate student, Kansas State Agricultural College.
Mary Margaret Cole, Manhattan, Kan. Teacher in city schools; graduate student, Kansas State Agricultural College.
Andrew D. Colliver, Hays, Kan. Assistant in agriculture, Fort Hays Branch Experiment Station.
Mary P. Colliver, 1061 West Thirty-first street, Los Angeles, Cal. Teacher of domestic science in city schools.
Gertrude Matilda (Conner) Snodgrass, Manhattan, Kan. Housewife.
Forrest Leslie Courter, Downs, Kan. Farmer and stock-raiser.
Bertha Cowles, R. F. D. No. 1, Vinland, Kan. At home.
Charles William Cummings, Wilmore, Kan. Farmer.
Jules Cool Cunningham, Centralia, Kan. Manager of Eleonora Fruit and Poultry Farms.
Mamie Grace Cunningham, Fairview, Okla. Teacher, Fairview public schools.
Edith Nellie Davis, Manhattan, Kan. At home.
Guy R. Davis, 2424 Benton boulevard, Kansas City, Mo. Real estate.
Minnie Estella Deibler, Manhattan, Kan. Teacher at Barnes, Kan., and student Kansas State Normal School.
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Scott Stuart Fay, Station A, Ames, Iowa. Assistant chemist, department of soils, Iowa Experiment Station.
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Lena (Finley) Mason, Cawker City, Kan. Housewife.
Frances Walker (Fish) Brown, Fall River, Kan. Housewife.
Charles Wesley Fryhofer, Ely's Lane, Rutherford, N. J. Government butter inspector, New York market.
Robert Anson Fulton, 10828 Hampden avenue, N. E., Cleveland, Ohio. Electrician.
George W. Gasser, Rampart, Alaska. Agent in charge of experiment station.
William H. Goodwin, Wooster, Ohio. Assistant entomologist, Ohio Agricultural Experiment Station.
Herbert Revere Groome, D. V. M., Jewell, Kan. Veterinarian.
Margaret Helen Haggart, Agricultural College, N. M. Professor of household economics, New Mexico College of Agriculture and Mechanic Arts.
Otto Albert Hanson, 310 State street, Quincy, Ill. Student, Gem City Business College.
William H. Harold, Clay Center, Kan. Superintendent and manager Clay Center Street and Power Company.
Lola May Harris, Manhattan, Kan. Teacher.
Henry P. Hess, 242 St. Louis street, Dallas, Tex. Sales engineer, Western Electric Company, Chicago, Ill.
Frederick Earl Hodgson, 1524 Palmer street, Philadelphia, Pa. Electrician, Cramps's ship-yards.
Jessie May Hoover, Brookings, S. Dak. Preceptress, school of agriculture, department of domestic science, South Dakota State Agricultural and Mechanic Arts College.
Charles Frederick Johnson, R. F. D. No. 2, Leonardville, Kan. Farmer.
James Henry Johnson, Blueslide, Wash. Electrician.
Winifred Mae Johnson, Solomon Rapids, Kan. At home.
George Henry Kellogg, 712 Leavenworth street, Manhattan, Kan. Teacher in Junction City schools.
Mildred I. Kirkwood, Marysville, Kan. Teacher.
Nina H. Kirkwood, Marysville, Kan. Teacher.
George Otto Kramer, Manila, P. I. In government service.
William C. Lane, Manhattan, Kan. Assistant in physics department, Kansas State Agricultural College.
Daniel Andrew Logan, 613 West Eighth street, Topeka, Kan. Accountant in district accountant's office, C. R. I. & P. railway.
Edward Logan, Manhattan, Kan. Junior veterinary science student, Kansas State Agricultural College.
Rhoda C. McCartney, Oakes, N. Dak. Primary teacher.
Nellie Reeder (McCoy) Cover, R. F. D. No. 1, Pasadena, Cal. Housewife.
Freida E. Marty, Merriam, Kan. Teacher.
Richard Meyer, Riley, Kan. Farmer.
Mary Mudge, Manhattan, Kan. Library work, Kansas State Agricultural College.
Lewis J. Munger, R. F. D. No. 1, Hollis, Kan. Farmer and stock-raiser.
Rachel Gertrude Nicholson, Manhattan, Kan. Teacher in city schools.
Jens Nygard, Vesper, Kan. Farmer.
Nell (Paulsen) Pickett, R. F. D. No. 9, Tyler, Tex. Housewife.
Leonard Marion Peairs, M. S., College Park, Md. Assistant entomologist, Maryland Agricultural College and Experiment Station.
Luther B. Pickett, R. F. D. No. 9, Tyler, Tex. Horticulturist.
Charles Holcomb Popenoe, 314 E. Capitol street, Washington, D. C. Agent and expert, bureau of entomology, United States Department of Agriculture.
Fanny E. (Reynolds) Fulton, 10828 Hampden avenue, N. E., Cleveland, Ohio. Housewife.
Arthur J. Rhodes, Manhattan, Kan. Civil engineer.
Eva May (Rickman) Gilbert, Woodruff, Kan. Teacher.
Kate L. Robertson, 3611 Zumstein avenue, Cincinnati, Ohio. Domestic science instructor in city schools.
Garfield Shirley, Eads, Colo. Farmer.
Walter Emory Smith, Bowen, Colo. Contractor and builder.
Crete Spencer, Manhattan, Kan. Stenographer in agronomy department, Kansas State Agricultural College.
William Wesley Stanfield, R. F. D. No. 4, Chanute, Kan. Farmer and fruit-grower.
Blanche Stevens, Humboldt, Kan. Instructor of domestic art, Barber Seminary, Anniston, Ala.
Effie L. Stewart, 308 North Twelfth street, Humboldt, Kan. At home.
Mary Catherine Strite, Cleveland, Okla. Teacher.
Jessie A. Sweet, 944 Ashland avenue, Evanston, Ill. Director of domestic science in South Evanston schools.
Charles Bartholow Swift, Williamsburg, Kan. Teller Williamsburg State Bank.
Charles L. Thompson, Etiwanda, Cal. Fruit-grower.
John Bert Thompson, Manila, P. I. Superintendent in charge, Singalong Experiment Station, Insular Bureau of Agriculture.
Roger S. Thompson, 1107 Monroe avenue, Kansas City, Mo. Draftsman.
Claude B. Thummel, West Point, N. Y. Cadet United States Military Academy.

Alonzo F. Turner, Norton, Kan. Teacher of agriculture and science, Norton county high school.
Grace E. Umberger, 304 Honore street, Chicago, Ill. Training for nurse in Illinois Training-school for Nurses.
Harry Umberger, 1416 K street, N. W., Washington, D. C. Scientific assistant, bureau of plant industry, United States Department of Agriculture.
Fred Van Dorp, R. F. D. No. 8, Topeka, Kan. Farmer.
Rebecca Rees (Washington) Samson, Quinter, Kan. Housewife.
Earl Wheeler, Washington barracks, Washington, D. C. Electrical engineer and instructor, engineer school, United States army.
Inez (Wheeler) Westgate, Lanham, Md. Housewife.
Clarence H. White, R. F. D. No. 5, Burlington, Kan. Farmer and stockman.
Wayne White, R. F. D. No. 5, Burlington, Kan. Farmer and stockman.
William J. Wilkinson, 1059 Poplar street, Oakland, Cal. Architect.
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George Heber Wilson, R. F. D. No. 8, Winfield, Kan. Farmer and stock-raiser.
George Wolf, 403 West street, New York city. Telephone development engineer.
Grace (Enfield) Wood, Altamont, Kan. Housewife.
Jay G. Worswick. Died in 1906.

1906.

Kate Alexander, Mahnattan, Kan. Teacher.
Albert Clay Aumann, R. F. D. No. 4, Arkansas City, Kan. Farmer.
Jesse N. Bealey, Morrill, Kan. Farmer and stock-raiser.
Raymond Russell Birch, Bureau of Agriculture, Manila, P. I. Agricultural inspector.
Herbert Joseph Bottomly, Cedar, Kan. Miller.
F. Edna Brenner, Manhattan, Kan. Teacher.
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Torje Carlson, care of superintendent of telegraph, Santa Fe system, Topeka, Kan. Electrical engineer.
James Hamilton Cheney, D. V. M., Hoisington, Kan. Veterinarian.
Edith Ellen Coffman, 1019 Bluemont avenue, Manhattan, Kan. Housekeeper, Young Women's Christian Association Home.
William Irving Coldwell, 801 Franklin avenue, Wilkinsburg, Pa. In testing department Westinghouse Electric and Manufacturing Company.
Archie Conner, R. F. D. No. 6, Lyons, Kan. Farmer and stock-raiser.
Jessie Leona (Travis) Cook, Oakley, Kan. Housewife.
Perry Alfred Cooley, Manhattan, Kan. Private secretary to president, Kansas State Agricultural College.
Ruth Cooley, Manhattan, Kan. At home.
Mary Copley, Manhattan, Kan. Clerk in post-office, Kansas State Agricultural College.
Winifred Anna Dalton, St. George, Kan. At home.
Charles Ernest Davis, 1480 State street, Schenectady, N. Y. Tester of electrical machinery.
Jay L. Dow, 936 West Adams street, Chicago, Ill. Telephone engineer, Western Electric Company.
Odessa Della Dow, Manhattan, Kan. Teacher.
Arthie Alleen Edworthy, Rainy Mountain School, Gotebo, Okla. Boys' matron, Indian school.
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Smith Faris, 482 South Pierce street, Milwaukee, Wis. Special apprentice, Allis-Chalmers Company.
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Elbert Ernest Greenough, Rocky Ford, Colo. Dairyman.
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Raymond D. Harrison, Jewell, Kan. Farmer.
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Charles Sumner Jones, R. F. D. No. 4, Montgomery, Ala. Planter and stock-raiser.
Fredric Arthur Kiene, Valencia, Kan. Farmer.
Clarence Brady Kirk, R. F. D. No. 3, Burr Oak, Kan. Farmer.
Laura Lillian Lyman, 43 North First street, Kansas City, Kan. Director of domestic science in Bethel Mission.
Charles Wilbur McCampbell, Manhattan, Kan. Junior veterinary student, Kansas State Agricultural College.
Cora E. McNutt, 623 Jackson street, Topeka, Kan. General secretary Young Women's Christian Association.
Alma McRae, Goodrich, Kan. Teacher.
Ernest Wilson Matherly, 830 Thurston street, Manhattan, Kan. Teacher.
Henry Greenleaf Maxwell, 37 East Poplar avenue, Columbus, Ohio. Student veterinary college, Ohio State University.
Caroline Morton, 117 East Tenth street, Topeka, Kan. Office work.
Verda Ellen (Murphy) Hudson, Manhattan, Kan. Housewife.
Ruth Emma Neiman, White Water, Kan. Teacher.
Ross N. Newland, care of York Manufacturing Company, York, Pa. Special apprentice in erecting department, York Manufacturing Company.
Henry Otto, 727 Humboldt street, Manhattan, Kan. Law student.
John J. Peckham, 936 West Adams street, Chicago, Ill. Electrical engineer.
Martha S. Pittman, Chilocco, Okla. Teacher of domestic science in Indian school.
Lester Allen Ramsey, care of York Manufacturing Company, York, Pa. Special apprentice in erecting department, York Manufacturing Company.
Richard Reece, Beacon, Mich. Principal, Beacon high school.
Jessie A. Reynolds, Manhattan, Kan. Assistant in preparatory department, Kansas State Agricultural College.
Emmit D. Richardson, Cawker City, Kan. Automobile repair shop.
Jennie Inez Ritner, box 363, Manhattan, Kan. At home.
Ramer Henry Sanneman, 1203 West Springfield street, Urbana, Ill. Student, University of Illinois.
William Paul Schroeder, Woodward, Okla. Manager of Woodward Creamery and Ice-cream Company.
Martin Roy Shuler, Effingham, Kan. Head of science department in Atchison county high school.
Emily G. (Smith) Skinner, 904 Ohio street, Lawrence, Kan. Housewife.
Milton David Snodgrass, Kodiak, Alaska. Superintendent Kodiak Breeding Station.
Mabelle Julie Sperry, Clifton, Kan. Superintendent city schools.
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Julia C. (Spohr) Heath, Peabody, Kan. Housewife.
Henry Adam Spuhler, Manhattan, Kan. Architect.
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Ernest Felix Swanson, Clyde, Kan. Expert for International Harvester Company.
Elbert Wren Thurston, 6042 Woodlawn avenue, Chicago, Ill. With Western Electric Company.
Warren Bunn Thurston, 126 State street, Enid, Okla. Butter-maker for New State Butter Company.
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Marcia Elizabeth Turner, 719 Bluemont avenue, Manhattan, Kan. Teacher, and graduate student, Kansas State Agricultural College.
Warren Elmer Watkins, Anthony, Kan. Farmer.
Chauncey Iles Weaver, 11½ North College street, Schenectady, N. Y. Student engineer, General Electric Company.
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Walter Scott Wright, Las Animas, Colo. Gardener.
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1907.

Ernest L. Adams, Ozawkie, Kan. Farmer.
Lizzie Bea Alexander, Manhattan, Kan. Office assistant in botanical department, Kansas State Agricultural College.
Cecile Allentharp, Woman's Hall, Decatur, Ill. Student, James Millikin University.
Alfred Henry Baird, Etiwanda, Cal. Farmer.
Ethel R. Barber, Manhattan, Kan. Graduate student, Kansas State Agricultural College.
Charles Earle Bassler, D. V. M., Manhattan, Kan. Assistant in veterinary science, Kansas State Agricultural College.
Julia Susanna Bayles, Manhattan, Kan. At home.
Ethel Esther Berry, Jewell, Kan. At home.
Clare Biddison, Manhattan, Kan. Graduate student and teacher in preparatory department, Kansas State Agricultural College.
Roy C. Bowman, Oxford, Kan. Grocery and dry-goods merchant.
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Fred Wallace Caldwell, D. V. M., Wamego, Kan. Veterinary surgeon.
Albert Francis Cassell, D. V. M., Beverly, Kan. Veterinary surgeon.
Robert Archer Cassell, 415 South Main street, Wichita, Kan. Telephone engineer.
James Hamilton Cheney, D. V. M., Hoisington, Kan. Veterinary surgeon.
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Margaret Ruth Cunningham, Fairview, Okla. At home.
William L. Davis, Fairview, Kan. Student, Kansas City Veterinary College.
Alexander H. Denneler.
Marshal Elsas.
Lois Failyer, Boston, Mass. Student, Simmons College.
Stella May Finlayson, Cheyenne Wells, Colo. Teacher.
Anna Helen Foster, Bennington, Kan. Teacher.
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James R. Garver, 740 Langdon, Madison, Wis. Graduate student, University of Wisconsin.
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Herbert Revere Groome, D. V. M., Jewell, Kan. Veterinary surgeon.
Samuel P. Haan, U. S. S. Independence, Mare Island, Cal. Electrician, United States navy.
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Frederick Houser, 1097 South Elm street, Oxford, Kan. Fruit farmer.
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Flora May Hull, Manhattan, Kan. Young Women's Christian Association secretary.
Kate May Hutchinson, Bellaire, Kan. At home.
Irene Ingraham, Manhattan, Kan. Graduate student, Kansas State Agricultural College.
Harry A. Ireland, Manila, P. I. Inspector, United States Department of Agriculture.
Louis M. Jorgenson, Goshen, Ind. Instructor in mathematics, Goshen high school.
Miner M. Justin, Manhattan, Kan. Farmer.
Clara Myrtle Kahl, Manhattan, Kan. Office assistant in Dairy Husbandry Department, Kansas State Agricultural College.

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Clarence Lambert, Oxnard, Cal. Ranchman.
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Adah Lewis, Manhattan, Kan. Graduate student, Kansas State Agricultural College.
Gertrude Lill, Mount Hope, Kan. Assistant principal of Council Grove high school.
Percy E. Lill, R. F. D. No. 2, Mount Hope, Kan. Farmer.
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Edwin Louis McClaskey, Manhattan, Kan. Draftsman.
Edwin William McCrone, D. V. M., Haddam, Kan. Veterinary surgeon.
Ethel McDonald, Manhattan, Kan. At home.
Carl E. Mallon, Manhattan, Kan. Traveling salesman, C. Hoffman and Son Milling Company.
Ella M. Meyer, Riley, Kan. At home.
James Arthur Milham, Hays, Kan. Assistant in animal husbandry, Fort Hays Branch Experiment Station.
Atsushi Miyawaki, Manhattan, Kan. Graduate student and assistant in Dairy Husbandry Department, Kansas State Agricultural College.
Joseph Shaw Montgomery, Manhattan, Kan. Stock farmer.
Leona Estel Moore, Manhattan, Kan. Cashier, E. B. Purcell Trading Company.
Edward Allen Morgan, R. F. D. No. 3, White Water, Kan. Farmer.
Clarence G. Nevins, Ford, Kan. Hardware merchant.
Bessie Minerva Nicolet, Manhattan, Kan. Assistant in Department of Music, Kansas State Agricultural College.
Amer B. Nystrom, 80 West Eighth avenue, Columbus, Ohio. Instructor in dairy mechanics, Ohio State University.
Ole J. Olsen, Baker, Kan. Farmer and stockman.
Harry G. F. Oman, R. F. D. No. 1, Leonardville, Kan. Farmer and stock-raiser.
Burton Sylvester Orr, 210 East Missouri avenue, St. Joseph, Mo. Engineering department, Swift & Company.
Joseph W. Painter. Died in 1907.
Jesse Leroy Pelham, Hays, Kan. Professor of agriculture, Western State Normal School.
Allen G. Philips, 130 Dryden Road, Ithaca, N. Y. Graduate student, Cornell University.
Harrison E. Porter, Manhattan, Kan. Assistant in mathematics, Kansas State Agricultural College.
Adeline Poston, Tuskegee Institute, Ala. Assistant teacher of cooking, Tuskegee Industrial and Normal Institute.
George Percival Potter, Peabody, Kan. Farmer.
Charles A. Pyle, D. V. M., Salina, Kan. Veterinary surgeon.
Elizabeth Randle, Riley, Kan. Teacher.
Lulu Mahala Rannells, 500 Pierre street, Manhattan, Kan. At home.
Hiram R. Reed, Coöperative Experiment Station, Garden City, Kan. Expert, bureau of plant industry, United States Department of Agriculture.
Edward C. Richards, Manhattan, Kan. Student, Kansas State Agricultural College.
James C. Richards, Manhattan, Kan. Student, Kansas State Agricultural College.
Donald Ross, Rolla, Mo. Student, Missouri School of Mines.
John Michael Ryan, Muscotah, Kan. Farmer and stock-raiser.
Edwin George Schafer, Manhattan, Kan. Assistant in agronomy department, and graduate student, Kansas State Agricultural College.
Walter Theodore Scholz, 607 Kansas avenue, Frankfort, Kan.
Martin William Schottler, 222 Exchange street, Emporia, Kan. Electrical construction work.
Earle Locke Shattuck, box 145, Ruston, La. Assistant in mathematics and mechanic arts, Louisiana Industrial Institute.
Wilson George Shelley, Akron, Colo. Assistant in dry-land agriculture, United States Experiment Station.
Perle Harrison Skinner, 1010 Humboldt street. Manhattan, Kan. Contractor and builder.
Frank Sorgatz, 341 Eighteenth street, San Diego, Cal. Carpenter.
Maurice I. Stauffer, Barnard, Kan. Banker.
Ora A. Stevens, Manhattan, Kan. Assistant in Botanical Department, Kansas State Agricultural College.
Claudius Stewart.
Grace Elizabeth Streeter, lock box 601, Oswego, Kan. Governess.
Lyman Bradley Streeter, R. F. D. No. 4, Wakefield, Kan. Stock-raiser.
Bertha Florence Sweet, Manhattan, Kan. At home.
S. Ray Tilbury, Williams, Ariz. Locomotive fireman, A. T. & S. F. railway.
Anna Rhea Tolin, Soldier, Kan. At home.
Virginia Troutman, Los Angeles, Cal. Student.
May E. Umberger, Beloit, Kan. Teacher of domestic science in Girls' Industrial School.
Josephine Elizabeth (Walter) Skinner, 1010 Humboldt street, Manhattan, Kan. Housewife.

Merton Luther Walter, R. F. D. No. 6, Lawrence, Kan. Farmer and breeder of pure-bred stock.
Catherine Niesz Ward, Minneapolis, Kan. Teacher in city schools.
Albert A. Werner, Etiwanda, Cal. Farmer.
Georgiana West, Tampico Alta, Vera Cruz, Mex. At home.
Helen Clara Westgate, 1020 Osage street, Manhattan, Kan. Student of illustrating, International Correspondence Schools.
Robert E. Williams, 1330 East Fifteenth street, Kansas City, Mo. Student, Kansas City Veterinary College.

SUMMARY.

The number of graduates up to 1908 is 1339, of whom 499 are women. Graduates previous to 1877 pursued, with two exceptions, a classical course, and received the degree of bachelor of arts. Since 1877, all have received the degree of bachelor of science, after a four-year course in the sciences, with good English training. Beginning with the year 1906, graduates from the veterinary science course have been granted the degree of D. V. M.

Of the 840 men, 46 are dead, and the remainder are reported in the following occupations:

Farmers and stock-raisers	170
Farm foremen	4
Fruit-growers, nurserymen, gardeners, and florists	28
Creamerymen	6
Professors and assistants in experiment stations and agricultural colleges	53
In United States Department of Agriculture	44
Teachers and employees in Indian service	6
Mechanics	12
Manufacturers	6
Miners	4
Contractors, architects, and builders	19
Draftsmen	11
Civil, electrical, mining and mechanical engineers	92
Veterinary surgeons	6
Postmasters and assistants	5
In military and naval service	10
Cadet United States Military Academy	1
Regent Kansas State Agricultural College	1
Professors and instructors in colleges	21
Superintendents and teachers in public schools	26
Graduate and special students, Kansas State Agricultural College	8
Students in other institutions	17
Ministers, missionaries, and secretaries of Y. M. C. A.	17
Journalists and editors	27
Merchants	26
Commercial travelers	14
Agents	8
Clerks, bookkeepers and stenographers	27
Officials and managers	17
In United States civil service	14
Physicians, students of medicine, chemists, druggists, dentists	37
Lawyers	23
District judges	2
County and state officials	10
Bankers and cashiers	16
Directors of physical training	2
Lecturer	1
Brokers and real-estate agents	14
Unknown	16
Total	821
In two occupations	27
	794

Of the 499 women, 23 are dead, and the remainder are occupied as follows:

Housewives	237
Teachers of domestic science and domestic art, and dietitians	36
Nurses	6
Physicians and druggists	5
In United States Department of Agriculture and Indian service	2
Secretary of Kansas State Agricultural College	1
Librarians	3
Professors and assistants in agricultural colleges and experiment stations	9
Professors and instructors in colleges	6
Teachers of art, music, and physical training	5
Principals and teachers in public schools	70
Graduate and special students, Kansas State Agricultural College	13
Students in other institutions	12
Y. W. C. A. secretaries	2
Bookkeepers, stenographers, and clerks	23
Lecturers	2
Journalists	3
Merchant	1
Telephone exchange	1
At home	41
Unknown	5
Total	483
In two occupations	7
	476

ADVANCED DEGREES.

Granted to persons not holding undergraduate degrees from this College.

1877.

John Fraser, LL. D. (Dead.)

1883.

John D. Walters, M. S., Manhattan, Kan. Professor of architecture and drawing, Kansas State Agricultural College.

1894.

Arnold Emch, M. S., Solothurn, Switzerland. Professor of mathematics, cantonal college.

1897.

Oscar E. Olin, M. A., Akron, Ohio. Professor of economics and history, and instructor in philosophy, Buchtel College.

1898.

Elam Bartholomew, M. S., Stockton, Kan. Farmer and botanist.

Herbert F. Roberts, M. S., Manhattan, Kan. Professor of botany, Kansas State Agricultural College.

George E. Rose, M. S., Rosedale, Kan. Superintendent of city schools.

1902.

George Fayette Thompson, M. S. Died in 1906.

1904.

Alice (Rupp) Wishard, M. A., Clinton, Ind. Housewife.

1907.

Edward T. Fairchild, M. A., Topeka, Kan. State superintendent of public instruction.

Charles Wesley Melick, M. S., College Park, Md. Professor of dairying, Maryland Agricultural College.

INDEX.

	page
Admission	149
Advanced degrees	29
Agronomy	61
Agronomy course	34
Animal husbandry	66
Animal husbandry course	36
Anatomy	126
Architecture	68
Architecture course	52
Astronomy	103
Bacteriology	70
Band	14
Battalion	16
Board of instruction	5
Board of Regents	4
Botany	71
Buildings	21
Business directions	153
Calendar	3
Chemistry	74
Civics	96
Civil engineering	77
Civil engineering course	50
Clinic	129
Courses of study	31
Dairy husbandry	79
Dairy husbandry course	38
Dairy short course	142
Degrees	29
Domestic art	81
Domestic science	83
Domestic science and art course	56
Domestic science and art short course	137
Drawing	68
Economics	85
Electives	58
Electrical engineering	90
Electrical engineering course	48
English language and literature	86
Entomology	93
Entrance requirements	149
Examinations	149
Expense	152
Experiment Station	26
Experiment Station officers	13
Faculty	5
Farmers' short course	138
Financial exhibit	19
Floriculture	101

page
Forestry. . . . 99
Freshman years 33
General duties and privileges 151
General information 149
General science course 58
Geology. . . . 93
German. . . . 95
Graduates, list of 197
Grounds and buildings 21
History. . . . 96
History and resources 17
Horticulture. . . . 98
Horticulture and forestry course 42
Library. . . . 24, 102
Mathematics. . . . 102
Mechanical engineering 103
Mechanical engineering course 46
Medicine. . . . 131
Military training 111
Music. . . . 113
Objects of the College 25
Outline of instruction 61
Pedagogy. . . . 116
Philosophy. . . . 115
Physical training 117
Physics. . . . 118
Physiology. . . . 128
Poultry husbandry 120
Poultry husbandry course 40
Preparatory department 120
Printing. . . . 123
Printing course 54
Psychology. . . . 115
Public speaking 124
Record of attendance 195
Short courses 135
Student assistants 12
Students, list of 155
Substitutions. . . . 157
Summary of attendance 195
Summer course 138
Surgery. . . . 132
Times of admission 147
Terms and vacations 3
Veterinary science 126
Veterinary science course 44
Young Men's Christian Association 145
Young Women's Christian Association 147
Zoölogy. . . . 93